Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments
General				
Inside cover page	ES-i and ES-ii		Added an Executive Summary	Summarized the reasons for the update, the uses of the manual and provided information on the public involvement process.
All Volumes			Renumbered Tables and Figures	Renumbered all tables and figures in all Volumes. The new numbers coordinate tables and figures to the section of the Volume where they are located. (Eg. Figure 2.4.2 is the second figure in Section 2.4, Table 4.1.3 is the third table in Section 4.1).
Volume I Minimum Technical Requirements a	and Site Planning			
Chapter 1 - Introduction				
Chapter 1 - Introduction	1-1 through 1-26		Update incorrect or outdated code references.	Revised incorrect or outdated code references, such as the RCW and WAC.
Chapter 1 - Introduction	1-1 through 1-26		Minor language changes.	Revised for clarity and removed outdate language in Sections 1.2, 1.4, 1.5.1, 1.6.10.
Section 1.5.4 Flow Control BMPs	1-5		Minor language changes.	Revised language for changes made in Appendix I-D Guidelines for Wetlands when Managing Stormwater.
Section 1.5.5 On-site Stormwater Management BMPs	1-6		Additional guidance provided.	Language added to categorize On-site Stormwater Management BMPs, including LID BMPs.
Section 1.6.4 The Puget Sound Action Agenda	1-11 through 1-13		Significant revisions to remove outdated guidance and to add new guidance. Section renamed.	Removed references and guidance related to the Puget Sound Water Quality Management Plan and replaced with guidance on the Puget Sound Action Agenda.
Section 1.6.5 Phase I - NPDES and State Waste Discharge Stormwater Permits for Municipalities	1-13 through 1-14	Yes	Additional guidance provided and outdated guidance removed.	Added guidance referring Phase I Municipal Stormwater Permittees to Appendix 1 of the permit for more information on the requirements for their stormwater program requirements.
Section 1.6.6 Phase II - NPDES and State Waste Discharge Stormwater Permits for Municipalities	1-14	Yes	Additional guidance provided and outdated guidance removed.	Added guidance referring Phase II Municipal Stormwater Permittees to Appendix 1 of the permit for more information on the requirements for their stormwater program requirements.
Section 1.6.7 Municipalities Not Subject to the NPDES Stormwater Municipal Permits	1-14		Guidance removed.	Removed outdated references to the Puget Sound Water Quality Management Plan. Section renamed.
Section 1.6.8 Industrial Stormwater General Permit	1-14 through 1-15	Yes	Revised to coordinate with the current Industrial Stormwater General Permit	Revised to provide an overview of the requirements of the current Industrial Stormwater General Permit and their relationship to the BMPs in the manual.
Section 1.6.9 Construction Stormwater General Permit	1-15 through 1-16	Yes	Revised to coordinate with the current Construction Stormwater General Permit	Revised to provide an overview of the requirements of the current Construction Stormwater General Permit and their relationship to the BMPs in the manual.
Section 1.6.15 Underground Injection Control Authorizations	1-18 through 1-19		Significant revisions to add guidance.	Added language to refer to Ecology's website and to define UIC well.
Chapter 2 - Minimum Requirements for New I	Development and Rec	levelopment		
Chapter 2 - Minimum Requirements for New Development and Redevelopment	2-1 through 2-46		Minor language changes.	Revised for clarity and removed outdated language in the introduction and in Sections 2.1, 2.2, 2.5.3, and 2.5.10.
Chapter 2 - Minimum Requirements for New Development and Redevelopment	2-1 through 2-46	Yes	Revised language.	Revised definitions, requirements, supplemental guidance, etc. to correspond to the changes in the Municipal Stormwater Permits and for new LID requirements.

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments
Section 2.1 Relationship to the Puget Sound Action Agenda	2-2		Added guidance. Section renamed.	Removed outdated references to the Puget Sound Water Quality Management Plan. Section renamed and focuses on relationship of the manual to the municipal stormwater permits.
Section 2.3 Definitions Related to Minimum Requirements	2-5 through 2-9	Yes	Added and revised definitions.	Added definitions for a few terms used previously but not previously defined. Other terms have a revised definition or a new definition (hard surfaces, LID, converted vegetation) because of the new low impact development (LID) guidance and requirements in the Municipal Stormwater Permits.
Section 2.4 Applicability of the Minimum Requirements	2-9 through 2-16	Yes	Revised the thresholds for determining which minimum requirements apply to new development and redevelopment. Revised supplemental guidelines.	Changes include: the replacement of "impervious" surfaces with "hard" surfaces, the application of minimum requirements #6 - #9 to replaced hard surfaces at new development sites, the deletion of the word "native" from the land conversion threshold.
Section 2.5.1 Minimum Requirement #1: Preparation of Stormwater Site Plans	2-16	Yes	Revised requirements and objective.	Added a new statement for the site plan to use site-appropriate development principles to retain native vegetation and minimize impervious surfaces to the extent feasible.
Section 2.5.2 Minimum Requirement #2: Construction Stormwater Pollution Prevention (SWPP)	2-17 through 2-26	Yes	Reorganized and revisions to: thresholds, general requirements, construction SWPPP elements, objective, and supplemental guidelines.	Changes include: revisions to the construction SWPPP elements to correspond with the Construction Stormwater General Permit, the addition of element #13 that requires the protection of LID Best Management Practices, and revision of element #12 to include responsibilities for an inspector or CESCL depending on the size of the project.
Section 2.5.4 Minimum Requirement #4: Preservation of Natural Drainage Systems and Outfalls	2-27 through 2-28	Yes	Minor additions.	Added clarification for peak discharges using 15 minute time steps.
Section 2.5.5 Minimum Requirement #5: On-site Stormwater Management	2-28 through 2-32	Yes	Multiple revisions for new low impact development (LID) requirements.	Changes include: the new LID performance standard and list options based on project size and location. The lists are divided into three land use types: lawn and landscaped areas; roofs, and other hard surfaces. Projects implementing the list option must select the first feasible BMP for each land use type. Some of the BMPs included in the lists are: rain gardens, permeable pavements, bioretention, soil quality and depth, full and partial dispersion methods, full downspout infiltration and perforated stub-outs.
Section 2.5.6 Minimum Requirement #6: Runoff Treatment	2-33 through 2-35	Yes	Revisions to the thresholds, Water Quality Design Flow Rate, and supplemental guidelines.	Revisions made to acknowledge the use of permeable pavements and the related new definitions. The intent is to continue to capture the same size and types of projects as previously. More accurate definitions for water quality design storm volume and flow rate.
Section 2.5.7 Minimum Requirement #7: Runoff Flow Control	2-35 through 2-40	Yes	Revisions to the thresholds and supplemental guidelines.	Revisions to acknowledge the use of permeable pavements and the related new definitions. Clarifications about the surfaces that the requirement applies to, and the use of the 0.10 /0.15 cfs threshold. The intent is to capture the same size and types of projects as previously.
Section 2.5.8 Minimum Requirement #8: Wetlands Protection	2-40 through 2-41	Yes	Revisions to the applicability, thresholds, standard requirement, additional requirements, and supplemental guidelines.	Revisions correspond to the significantly revised Appendix I-D Guidelines for Wetlands when Managing Stormwater.

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments
Section 2.8 Exceptions/Variances	2-45 through 2-46	Yes	Additional guidance provided.	Changed and added language to be consistent with the requirements in Appendix 1 of the 2007 municipal stormwater permits.
Chapter 3 - Preparation of Stormwater Site P	lans			
Chapter 3 - Preparation of Stormwater Site Plans	3-1 through 3-17	Yes	Significant changes to incorporate procedures necessary for LID implementation.	Revised for clarity and removed outdate language in the introduction and in section 3.1.7.
Section 3.1.1 Step 1 - Collect and Analyze Information on Existing Conditions	3-2 through 3-7	Yes	Additional guidance provided and outdated guidance removed.	Additional guidance details the information necessary for site analysis, and in particular for LID site design. Split into subsections based on whether Min. Requirements 1 - 5 apply, or Min. Requirements 1 - 9 apply.
Sections 3.1.2 to 3.1.4	3-7 through 3-8	Yes	Guidance added.	References to on-site BMPs added and preliminary determination of applicable minimum requirements.
Section 3.1.5 Step 5 - Prepare a Permanent Stormwater Control Plan	3-8 through 3-12	Yes	Revisions to all subsections of Developed Site Hydrology of the Permanent Stormwater Control Plan.	Significant changes to describe how to prepare the Permanent Stormwater Control Plan that incorporates LID features. Separate guidance for projects subject to Min. Requirements 1 - 5 and projects subject to Min. Requirements 1 - 9.
Section 3.1.6 Step 6 - Prepare a Construction Stormwater Pollution Prevention Plan	3-13 through 3-14	Yes	Minor language changes.	Changes for clarification and to remove repetitive language.
Section 3.1.7 Step 7 - Complete Stormwater Site Plan	3-14 through 3-16	Yes	Reference to needed soils report and addition of Declaration of Covenants and Grants of Easement.	Soils reports are necessary part of LID decisions. Declarations of Covenants and Grants of Easement are necessary mechanisms to identify LID features, establish maintenance requirements and government access for inspections of privately maintained stormwater BMPs and facilities.
Section 3.2.2 Final Corrected Plan Submittal	3-17		Guidance added.	Added several LID BMPs that require the submission of as-builts.
Chapter 4 - BMP and Facility Selection Proce	ss for Permanent Sto	rmwater Contro	ol Plans	
Section 4.2 BMP and Facility Selection Process	4-1 through 4-4		Revised language, proposed replacing the language in <i>Step V: Select Treatment Facilities</i> with a reference to Chapter 2 of Volume V.	Revisions and new language especially in Step III for guidance on modeling threshold discharge areas. Minor revisions to correspond with the changes in the Municipal Stormwater Permits and for new LID requirements. Ecology replaced the language in Step V: Select Treatment Facilities with a reference to Chapter 2 of Volume V.
Appendix I-A Guidance for Altering the Minim	num Requirements Th	rough Basin Pl	anning	
Appendix I-A Guidance for Altering the Minimum Requirements Through Basin Planning	A-1 through A-3		Additional guidance provided.	Added language for clarity on use of Basin Planning for addressing retrofit needs and for developing an alternative flow control strategy.
Appendix I-B Rainfall Amounts and Statistics				
Appendix I-B Rainfall Amounts and Statistics	B-1 through B-5		Removed introductory language and background information on the Water Quality Design Storm and Water Quality Design Flow Rate.	Removed background and outdated information for brevity. Renamed the rainfall tables.

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments		
Appendix I-D Guidelines for Wetlands when I	Managing Stormwater	,				
Appendix I-D Guidelines for Wetlands when Managing Stormwater	D-1 through D-18	Yes	Multiple revisions for the use and/or the protection of Wetlands when managing stormwater.	Rewritten to remove outdated information, clarify concepts, and approach the protection and use of wetlands through controlling discharges to wetlands. Total discharges to wetlands must not deviate by more than 20% on a single event basis, and must not deviate by more than 15% on a monthly basis.		
Appendix I-E Flow Control-Exempt Surface V	Vaters					
Appendix I-E Flow Control-Exempt Surface Waters	E-1 through E-4	Yes	Added and deleted Exempt Surface Waters.	List edited to add additional waters based on specific requests and analyses, and to remove reference to a creek in Eastern WA.		
Appendix I-F Feasibility Criteria for Selected	Low Impact Developn	nent Best Mana	gement Practices			
Appendix I-F Basins with 40% or more total impervious area since 1985	F-1	Yes	Added Map	Map shows basins which potentially qualify for use of existing land cover as the pre-developed land cover for flow control purposes. See reference in Min. Requirement #7.		
Glossary and Notations	Glossary and Notations					
Glossary and Notations	Glossary-1 through Glossary-47		Added and revised definitions.	There are a few terms, used previously but not defined, for which a definition has been added. A handful of other terms have a revised definition, and there are new terms, because of the new low impact development (LID) guidance and requirements in the Municipal Stormwater Permits.		

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments				
Volume II Construction Stormwater Pollution	Prevention							
Chapter 1 - Introduction Construction Storm	hapter 1 - Introduction Construction Stormwater Pollution Prevention							
Chapter 1 - Introduction Construction Stormwater Pollution Prevention	1-1 through 1-9		Multiple revisions for plain language, clarity, and brevity.	Revised this chapter to use simpler and clearer language.				
Section 1.3 How to Use This Volume	N/A		This section was removed. The information in this section is now included in Sections 1.2.	Removed this section by combining it with Section 1.2 to eliminate duplicate language.				
Section 1.3 Thirteen Elements of Construction Stormwater Pollution Prevention	1-3	Yes	Renamed.	Revised to incorporate a new element, Protect Low Impact Development BMPs.				
Figure 1.5.1	1-6		Replaced.	Replaced older figure with an updated one.				
Chapter 2 - Regulatory Requirements								
Chapter 2 - Regulatory Requirements	2-1 through 2-6		Multiple revisions for plain language, clarity, and brevity.	Revised this chapter to use simpler and clearer language. Information covered in Volume I, Section 1.6 Relationship of the Manual to Federal, State, and Local Regulatory Requirements was removed.				
Chapter 2 - Regulatory Requirements	2-1 through 2-6	Yes	Multiple revisions to coordinate the manual to the Washington State General Stormwater Permits.	Revised this chapter to update this information for revisions to the Stormwater General Permits (including the Municipal, Construction, and Industrial Permits).				
Section 2.1 and Section 2.2	2-2 through 2-4	Yes	Section 2.1 The Construction Stormwater General Permit and Section 2.2 Construction Stormwater Pollution Prevention Plans now replace the previous Sections 2.1 and 2.2.	Replaced these sections to remove invalid information or duplicate information. Sections 2.1 and 2.2 now go into detail about the relationship of Volume II to the Construction Stormwater General Permit and the requirements for a Stormwater Site Pollution Prevention Plan.				
Chapter 3 - Planning								
Chapter 3 - Planning	3-1 through 3-32		Multiple revisions for plain language, clarity, and brevity.	Revised this chapter to use simpler and clearer language. Information covered in Volume I, Section 1.6 Relationship of the Manual to Federal, State, and Local Regulatory Requirements was removed.				
Section 3.2 and Section 3.3	3-4 through 3-32		Previous Sections 3.2 and 3.3 have been reversed.	Moved The Construction SWPPP Requirements, previously in Section 3.3 to Section 3.2 for clarity. The Step-By-Step Procedure now follows in Section 3.3. Please note that the Construction Stormwater Pollution Prevention Plan Checklist is still located in Section 3.3.				
Section 3.3.3 (Previously Section 3.2.3) Step 3 - Construction SWPPP Development and Implementation	3-8 through 3-32	Yes	Multiple revisions to the Construction SWPPP Elements.	Revised The Construction SWPPP Elements, described in Section 3.3.3 to coordinate with the Construction Stormwater General Permit, Municipal Stormwater Permits, and the Construction BMPs in Chapter 4. Each element now contains an Additional Guidance section that has information not required by the permits. Added Element #13 Protect Low Impact Development BMPs.				

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments			
hapter 4 - Best Management Practices Standards and Specifications							
Chapter 4 - Best Management Practices Standards and Specifications	4-1 through 4-128		Added approved equivalent BMPs Sections.	Refers to Ecology's website for BMPs that have been approved as equivalent.			
Section 4.1 Source Control BMPs	4-1 through 4-2	Yes	Added Table 4.1 Source Control BMPs by SWPPP Element	Ecology added Table 4.1 Source Control BMPs by SWPPP Element to show how the BMPs listed in Section 4.1 relate to the SWPPP Elements.			
BMP C103: High Visibility Fence	4-6		This BMP now includes high visibility silt fence. Multiple revisions for plain language, clarity, and brevity.	Added high visibility silt fence because it meets the intent of BMP C103. Ecology revised this chapter to use simpler and clearer language.			
BMP C104: Stake and Wire Fence	N/A		This BMP was removed.	Removed this BMP because BMP C103: High Visibility Fence meets the intent of this BMP in a safer and more commonly used manner.			
BMP C105: Stabilized Construction Entrance / Exit	4-7 through 4-9		Additional guidance provided and outdated guidance removed.	Added and removed guidance for this BMP based on comments received and field experience.			
BMP C106: Wheel Wash	4-9 through 4-11		Additional guidance provided and outdated guidance removed.	Added guidance to clarify that wheel wash wastewater shall not discharge to surface or ground water.			
Figure 4.1.2 - Wheel Wash	4-11		Figure was updated	Updated figure to provide more details of a typical Wheel Wash.			
BMP C120: Temporary and Permanent Seeding	4-13 through 4-19		Multiple revisions for plain language, clarity, and brevity. Additional guidance provided and removed.	Revised and reorganized this BMP to use simpler and clearer language. Moved some guidance to BMP C121: Mulching or BMP C125: Top soiling. Ecology added and removed additional guidance for this BMP based on comments received and field experience.			
BMP C121: Mulching	4-19 through 4-21		Additional guidance provided.	Added minimum mulch thickness based on field experience and comments. Ecology added guidance previously found in BMP C120: Temporary and Permanent Seeding to this BMP.			
Table 4.1.8	4-21		Additional guidance provided.	Added Wood Straw and Wood Straw Mulch to the table.			
BMP C122: Nets and Blankets	4-22 through 4-25		Multiple revisions for plain language, clarity, and brevity.	Revised this BMP to use simpler and clearer language.			
BMP C123: Plastic Covering	4-25 through 4-27		Additional guidance provided and outdated guidance removed.	Removed the use of plastic sheeting over seeded areas because other coverings (such as compost and straw) are preferable. Ecology added and removed guidance for this BMP based on comments received and field experience.			
BMP C124: Sodding	4-27 through 4-28		Additional guidance provided and outdated guidance removed.	Provided a link to composting guidance and removed old reference to compost specification.			
BMP C125: Top soiling / Composting	4-29 through 4-32		Additional guidance provided and outdated guidance removed.	Added guidance previously found in BMP C120: Temporary and Permanent Seeding to this BMP. Ecology added and removed guidance for this BMP based on comments received and field experience.			
BMP C150: Materials on Hand	4-42 through 4-43		Suggested measures and quantities removed.	Removed measures and quantities because measures and quantities should be based on the size of the construction site.			

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments
BMP C151: Concrete Handling and BMP C152: Sawcutting and Surface Pollution Prevention	4-43 through 4-45	Yes	Additional guidance provided.	Added guidance to coordinate this BMP with the requirements of the Construction Stormwater General Permit and to make it clear that Concrete spillage or concrete discard to surface waters of the State is prohibited.
BMP C154: Concrete Washout Area	4-48 through 4-53		Added this BMP.	Added this BMP to provide additional guidance for concrete washout areas.
BMP C160: Certified Erosion and Sediment Control Lead	4-54 through 4-55		Additional guidance provided and outdated guidance removed.	Minimum Requirements for ESC Training and Certification Courses has been removed. Ecology plans on issuing separate, updated guidance in the near future.
BMP C161: Payment of Erosion Control Work	N/A		This BMP was removed.	Removed this BMP because it is not applicable to the full range of projects needing to perform Erosion and Sediment Control Work.
BMP C180: Small Project Construction Stormwater Pollution Prevention	N/A	Yes	This BMP was removed.	Removed this BMP because of changes in threshold requirements in both the Municipal Stormwater General Permits and Construction Stormwater General Permit.
Section 4.2 Runoff Conveyance and Treatment BMPs	4-57	Yes	Added Table 4.2 Runoff Conveyance Treatment BMPs by SWPPP Element	Added Table 4.2 Runoff Conveyance Treatment BMPs by SWPPP Element to show how the BMPs listed in Section 4.2 relate to the SWPPP Elements.
BMP C207: Check Dams	4-74 through 4-77		Additional guidance provided.	Added guidance for this BMP based on comments received and field experience.
BMP C220: Storm Drain Inlet Protection	4-78 through 4-79		Additional guidance provided.	Added guidance for inlet protection of lawn and yard drains and based on comment received and field experience.
BMP C230: Straw Bale Barrier	N/A		This BMP was removed.	Removed this BMP because this BMP has been proven to be ineffective.
BMP C233: Silt Fence	4-90 through 4-95		Multiple revisions for plain language, clarity, and brevity.	Revised and reorganized this BMP to use simpler and clearer language.
BMP C235: Wattles	4-96 through 4-99		Renamed from Straw Wattles.	Renamed this BMP to include wattles made from compost or other materials.
BMP C236: Vegetated Spray Fields	4-100 through 4-102		Added this BMP.	Added this new BMP for dewatering, Construction SWPPP Element #10.
BMP C250: Construction Stormwater Chemical Treatment	4-112 through 4-120		Additional guidance provided.	Added guidance for this BMP, previously available online, to coordinate with the Chemical Technology Assessment Protocol (CTAPE) program.
BMP C251: Construction Stormwater Filtration	4-120 through 4-124		Additional guidance provided.	Added sizing criteria for this BMP, previously available online.
BMP C252: High pH Neutralization Using CO ₂	4-125 through 4-127		Added this BMP.	Added this BMP, previously available online, to provide guidance on neutralizing high pH through the use of CO ₂ .
BMP C253: pH Control for High pH Water	4-128 through 4-129		Added this BMP.	Added this BMP, previously available online, to provide additional guidance for neutralizing high pH.
Appendix II-B Background Information on Chemical Treatment	B-1 through B-3		Multiple revisions to coordinate with BMP C252 and BMP C53.	Revised this appendix to coordinate with the new information provided in BMP C252 and in BMP C253.

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments
Volume III Hydrologic Analysis and Flow Con	trol Design / BMPs			
Chapter 2 - Hydrologic Analysis				
Chapter 2 - Hydrologic Analysis	2-1 through 2-17		Multiple revisions for plain language, clarity, and brevity.	Revised this chapter to use simpler and clearer language. Outdated guidance was replaced.
Section 2.2 Western Washington Hydrology Model	2-4 through 2-9		Section 2.2 split into multiple subsections.	Section 2.2 split into multiple subsections for clarity and for referencing purposes.
Section 2.2 Western Washington Hydrology Model	2-4 through 2-9		Additional guidance provided.	Added guidance on upcoming Western Washington Hydrology Model (WWHM) changes.
Section 2.2.2 Assumptions made in creating the WWHM	2-5 through 2-8		Additional guidance provided.	Added guidance on precipitation data and upcoming WWHM changes.
Section 2.2.3 Guidance for flow-related standards	2-8 through 2-9	Yes	Additional guidance provided and outdated guidance removed for Minimum Requirements (MR).	Added guidance for MR #5 which now includes an LID Performance Standard. Revised the guidance for MR#8 to reflect the changes made in Volume I, Appendix 1-D.
Chapter 3 - Flow Control Design				
Chapter 3 - Flow Control Design	3-1 through 3-109		Multiple revisions for plain language, clarity, and brevity.	Revised this chapter to use simpler and clearer language.
Chapter 3 - Flow Control Design	3-1	Yes	Update text for consistency with revised Min Reg'mt #5 and LID	Added references to Minimum Requirement #5, bioretention and permeable pavements in introductory section.
Section 3.1 Roof Downspout Controls	3-1 through 3-18	Yes	Update text & figure for consistency with revised Min Req'mt #5	Text and figures updated to indicate priorities for handling roof runoff.
Section 3.1 Roof Downspout Controls	3-1 through 3-3	Yes	Update text for consistency with revised Min Req'mt #5	Updated references to revised roof downspout BMPs and Rain Gardens in the introductory section.
Section 3.1.1 Roof Downspout Full Infiltration (BMP T5.10A)	3-4 through 3-10	Yes	Update text for consistency with revised Min Req'mt #5	Text changes for consistency with new priority lists in Min.Req'ment #5 and feasibility criteria. Needed better clarity in design guidance
Section 3.1.2 Downspout Dispersion Systems	3-11 through 3-16	Yes	Update text for consistency with revised Min Req'mt #5	Text changes for consistency with new priority lists in Min. Req'ment #5 and feasibility criteria. Improved clarify in design guidance and computer modeling. Added guidance for design criteria for dispersion trenches and splashblocks.
Section 3.1.3 Perforated Stub-out Connections	3-17 through 3-18	Yes	Update text for consistency with revised Min Req'mt #5	Text changes for consistency with new priority lists in Min. Req'ment #5 and feasibility criteria. Updated design guidance.
Section 3.2 Detention Facilities	3-19 through 3-64		Multiple revisions for plain language, clarity, and brevity.	Revised this chapter to use simpler and clearer language.
Section 3.2 Detention Facilities	3-35		Updated references.	Updated Maintenance narrative to refer to Appendix IV-G Management of Street Wastes in Volume IV.
Section 3.3 Infiltration Facilities for Flow Control and Treatment	3-65 through 3-102		Section significantly rewritten.	Made significant changes to all sub-sections. Section pertains primarily to design of centralized infiltration facilities. Certain sections also apply to distributed bioretention facilities as indicated in text.
Section 3.3.1 Purpose	3-65	Yes	Revised guidance and reference LID.	Expanded purpose statement and clarified in regard to the types of facilities covered in Section 3.3. Added references to Bioretention and Permeable Pavement sections.
Section 3.3.2 Description	3-65	Yes	Additional guidance provided including Min Req'mt #5.	Made clarifications and added language for complying with MR#5. Added guidance for oil control and pre-treatment facilities.
Section 3.3.3 Applications	3-66		Additional guidance provided.	Minor text change
Section 3.3.4 Steps for Design of Infiltration Facilities	3-68 through 3-71	Yes	Revised several steps for new infiltration rate guidance and the new LID performance standard.	Revised Step 2 to include guidance for meeting MR#5. Significantly revised Step 5 for the new guidance provided in section 3.3.6. Revised Step 6 for clarity and for meeting MR#5. Revised Step 7 for clarity.

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments
Section 3.3.5 Site Characterization Criteria	3-72 through 3-75		Revised guidance on subsurface characterization, soil testing, and infiltration receptor. Removed guidance for hydrogeologic investigation and figure 3.27, USDA Textural Triangle.	Multiple changes to subsurface characterization include added guidance on groundwater monitoring wells and the use of grain size analysis method for estimating infiltration rates. Deleted infiltration rate determination sub-section due to redundancy with next section.
Section 3.3.6 Design Saturated Hydraulic Conductivity - Guidelines and Criteria	3-75 through 3-83		Revisions for determining the saturated hydraulic conductivity (infiltration rate). Section renamed.	Replaced "Infiltration Rate" with "Saturated Hydraulic Conductivity" throughout section. Updated the guidelines and criteria for determining saturated hydraulic conductivity. Added guidance on pilot infiltration testing (PIT), and soil grain size analysis. Revised correction factors for PIT results and soil grain size method. Removed options based on USDA Soil Texture Classification and D10 grain size.
Section 3.3.7 Site Suitability Criteria (SSC)	3-83 through 3-86		Additional guidance provided and outdated guidance removed.	Updated references, removed unneeded guidance, revised limits on infiltration rates, added a minimum organic content for treatment, amended drawdown guidance, and verification testing.
Section 3.3.8 Steps for Designing Infiltration Facilities - Detailed Approach	3-86 through 3-90		Multiple revisions. Previous steps 1-4 removed. Multiple steps revised. Added groundwater mounding analysis step.	Removed steps to select location, estimate volume of stormwater, develop a trial infiltration facility geometry, conduct a geotechnical investigation, and determine the saturated hydraulic conductivity; instead refers to steps 1-5 in section 3.3.4. Revised Figure 3.27 for updated guidance. Revised guidance for adjusting the preliminary design infiltration rate. Added a step for groundwater mounding analysis. Added guidance for conducting performance testing.
Section 3.3.9 General Design, Maintenance, and Construction Criteria for Infiltration Facilities	3-90 through 3-94		Additional guidance provided and outdated guidance removed.	Added guidance for sizing for flow control, pretreatment design criteria, and maintenance. Made wording clarifications to guidance.
Section 3.4 Site Procedures for Bioretention and Permeable Pavement Use	3-103 through 3-109	Yes	Added this section for bioretention and permeable pavement.	Added guidance re field tests, computer modeling, and implementation for bioretention / rain gardens and permeable pavement.
Appendix III-A Isopluvial Maps for Design Sto	orms			
Appendix III-A Isopluvial Maps for Design Storms	A-1		Added link to website.	Added a link to a website where isopluvial maps are available.
Appendix III-B Western Washington Hydrolog	y Model - Information	, Assumptions	, and Computation Steps	
Appendix III-B Western Washington Hydrology Model - Information, Assumptions, and Computation Steps	B-1 through B-13	Yes	Additional guidance provided and outdated guidance removed.	Added guidance on current and upcoming versions of WWHM. Added guidance for the modeling on LID elements and wetlands. Removed outdated computation steps.
Appendix III-C Washington State Department	of Ecology Low Impa	ct Developmen	t Design and Flow Modeling Guidance	
Appendix III-C Washington State Department of Ecology Low Impact Development Flow Modeling Guidance	C-1 through C-13	Yes	Additional guidance provided and outdated guidance removed.	Text in regard to design guidance removed. All design guidance moved to Volume V. Two sets of modeling guidance provided. One for WWHM 3, and one for upcoming WWHM 2012.
Appendix III-D Procedure for Conducting a P	ilot Infiltration Test			Development of the state of the
Appendix III-D Procedure for Conducting a Pilot Infiltration Test	N/A		Appendix removed.	Procedures for conducting the PIT have been included within the proposed text on "Design Infiltration Rate Determination" in sections 3.3.6.
				3.3.6.

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments
Volume IV Source Control BMPs				
Chapter 1 - Introduction				
Chapter 1 - Introduction	1-1 through 1-5		Minor language changes.	Revised for clarity and removed outdated language.
Section 1.3 How to Use this Volume	1-2		Additional guidance provided and outdated guidance removed.	Added new guidance regarding the Industrial Stormwater General Permit (ISWGP), Boatyard General Permit (BGP), and Sand and Gravel General Permit (S&GP) and the inclusion of "applicable" BMPs from this volume in Industrial Stormwater Pollution Prevention Plans (Industrial SWPPPs).
Section 1.5 Treatment BMPs for Specific Pollutant Sources	1-3	Yes	Additional guidance provided and outdated guidance removed.	Added new guidance clarifying the requirements regarding treatment BMPs for facilities covered under the ISWGP (or other General Stormwater Permits).
Section 1.6.1 Applicable (Mandatory) BMPs	1-3 through 1-4		Additional guidance provided and outdated guidance removed.	Added new guidance describing the use of applicable (mandatory) BMPs in regards to the ISGP, BGP, and S&GP. Section renamed to make it clearer that applicable BMPs are Mandatory for permittees under the ISWGP and BGP.
Section 1.6.2 Recommended BMPs	1-4	Yes	Additional guidance provided.	Added guidance regarding facilities covered under the ISWGP that trigger a corrective action.
Chapter 2 - Selection of Operational and Stru	ctural Source Contro	I BMPs		
Chapter 2 - Selection of Operational and Structural Source Control BMPs	2-1 through 2-66		Numbered BMPs.	Added numbers in the "S400" series to BMPs in Volume IV.
Chapter 2 - Selection of Operational and Structural Source Control BMPs	2-1 through 2-66		Minor revisions for plain language, clarity, and brevity.	Revised BMPs to use simpler and clearer language, and removed outdated references.
Chapter 2 - Selection of Operational and Structural Source Control BMPs	2-1 through 2-2		Additional guidance provided and outdated guidance removed.	Added new guidance describing the use of applicable (mandatory) BMPs in regards to the ISGP, BGP, and S&GP. Added guidance regarding facilities covered under the ISWGP that trigger a Level 1 or 2 corrective action.
Section 2.1 Applicable (Mandatory) Operational Source Control BMPs	2-2 through 2-6		Additional guidance provided and outdated guidance removed.	Revised wording to clarify where this Section applies. Revised several BMPs for clarity and to coordinate with the ISWGP. Significant changes include the addition of vacuum sweeping and pressure washing, spill prevention and cleanup, visual inspections and record keeping.
Section 2.2 Pollutant Source Specific BMPs	2-7 through 2-66		Additional guidance provided and outdated guidance removed. Minor formatting revisions.	Revised wording to clarify where this Section applies. Added new text on ISWGP requirements. Added guidance regarding facilities covered under the ISWGP that trigger a Level 1 or 2 corrective action. Changed the title format for the BMPs to match the other volumes and added a numbering system to the BMPs.
S401 BMPs for the Building, Repair, and Maintenance of Boats and Ships	2-7 through 2-9		Additional guidance provided and several BMPs clarified.	Clarified guidance describing the requirements under the BGP and ISGP regarding boatyard activities. Revised BMPs to use simpler and clearer language.
S402 BMPs for Commercial Animal Handling Areas	2-10		Minor revisions for plain language, clarity, and brevity.	Revised BMPs to use simpler and clearer language.
S403 BMPs for Commercial Composting	2-10 through 2-12		Additional guidance provided and outdated guidance removed.	Revised language because solid waste regulations prohibit discharge of compost leachate. Revised BMPs to use simpler and clearer language, and removed outdated references.

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments			
S405 BMPs for Deicing and Anti-Icing Operations - Airports and Streets	2-13 through 2-14		Additional guidance provided and outdated guidance removed.	Revised language to coordinate with the ISGP. Removed outdated references.			
S414 BMPs for Maintenance and Repair of Vehicles and Equipment	2-32 through 2-34	Yes	Revision for consistency with the ISGP	Updated "applicable BMP" guidance for handling of liquids in scrap vehicles to align with ISGP.			
S416 BMPs for Maintenance of Roadside Ditches	2-35 through 2-37		Additional guidance provided and updated references.	Additional guidance provided for the handling of ditch cleanings.			
S423 BMPs for Recyclers and Scrap Yards	2-45 through 2-46		Updated reference to guidance.	Updated the reference to guidance for Vehicle Recyclers.			
S424 BMPs for Roof/Building Drains at Manufacturing and Commercial Buildings	2-46 through 2-47		Added reference to guidance.	Added a references to Volume V and Ecology publications for BMPs.			
S426 BMPs for Spills of Oil and Hazardous Substances	2-48 through 2-49		Additional guidance provided and outdated guidance removed.	Revised several BMPs for clarity and to coordinate with the ISWGP.			
S430 BMPs for Urban Streets	2-58 through 2-59		Additional guidance provided.	Clarified that facilities not under the ISWGP may consider some water use in street cleaning.			
S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	2-60 through 2-62	Yes	Additional guidance provided and outdated guidance removed.	Added guidance to clarify that the ISWGP prohibits the discharge of process wastewater to ground water or surface water. Removed outdated guidance.			
Figure 2.15 - Uncovered Wash Area	N/A		Figure Deleted	Figure was unclear and the existing text provided a better description of the required controls.			
S432 BMPs for Wood Treatment Areas	2-63 through 2-64		Additional guidance provided and several BMPs clarified.	Clarified guidance describing which NPDES permit(s) regulate wood treatment areas. Revised BMPs to use simpler and clearer language.			
S433 BMPs for Pools, Spas, Hot Tubs and Fountains	2-64 through 2-66		Additional guidance provided.	Added this BMP to provide further guidance consistent with BMPs within this volume.			
Appendix IV-A Urban Land Uses and Pollutar	nt Generating Sources	<u> </u>					
Appendix IV-A Urban Land Uses and Pollutant Generating Sources	A-1 through A-24		Minor language changes.	Edits for clarity and to replace and revise guidance documents and WAC references.			
Commercial Composting - SIC 2875	A-14		Additional guidance provided	Added "Potential Pollutant Generating Sources"			
Appendix IV-B Stormwater Pollutants and Th	eir Adverse Impact						
Appendix IV-B Stormwater Pollutants and Their Adverse Impact	B-1 through B-2		Minor language changes. Removed Table.	Minor language changes for clarity. Removed the outdated Table in Appendix IV-B.			
Appendix IV-C Recycling/Disposal of Vehicle	Fluids/Other Wastes						
Appendix IV-C Recycling/Disposal of Vehicle Fluids/Other Wastes	C-1		Minor language changes.	Minor language changes for clarity.			
Appendix IV-D Regulatory Requirements Tha	t Impact Stormwater	Programs					
Appendix IV-D Regulatory Requirements That Impact Stormwater Programs	D-1 through D-9		Minor language changes.	Edits for clarity and to replace and revise guidance documents and WAC references.			
Appendix IV-E NPDES Stormwater Discharge	Permits						
Appendix IV-E NPDES Stormwater Discharge Permits	E-1 through E-7	Yes	Additional guidance provided and outdated guidance removed.	Edits to make guidance consistent with the most recent industrial and municipal stormwater permits.			
Appendix IV-G Recommendations for Manage	Appendix IV-G Recommendations for Management of Street Wastes						
Appendix IV-G Recommendations for Management of Street Wastes	G-1 through G-15		Multiple revisions for plain language, clarity, and brevity. Additional guidance provided and outdated guidance removed.	Removed outdated guidance and added new guidance in the contamination in Street Waste Solids subsection. Reorganized the disposal of street waste liquids subsection, no major content changes. Minor revisions to the Site Evaluation subsection.			

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments				
Volume V Runoff Treatment BMPs	/olume V Runoff Treatment BMPs							
Chapter 1 - Introduction								
Chapter 1 - Introduction	1-1 through 1-4		Minor revisions for plain language, clarity, and brevity.	Revised BMPs to use simpler and clearer language, and removed outdated references.				
Section 1.4.3 Treatment Methods	1-2 through 1-4		Additional guidance provided and outdated guidance removed.	Revised guidance for oil/water separation, pretreatment, infiltration, filtration, emerging technologies, and on-line systems. Added Bioretention as a treatment method.				
Chapter 2 - Treatment Facility Selection Proc	ess							
Chapter 2 - Treatment Facility Selection Process	2-1		Additional guidance provided.	Added paragraph on emerging technology options.				
Section 2.1 Step-by-Step Selection Process for Treatment Facilities	2-1 through 2-9		Minor revisions to the steps. Revised description of surface waters triggering enhanced treatment.	Revised selection process steps for clarity and to remove outdated information. Revised the Treatment Facility Selection Flow Chart for revised guidance throughout Volume V. Revised description of surface waters triggering enhanced treatment for accuracy.				
Figure 2.1.1	2-3		Revised list of options.	Some treatment BMP options removed, emerging technologies added, one BMP renamed. Added a note for Phosphorous facilities that require Enhanced Treatment.				
Section 2.2 Other Treatment Facility Selection Factors	2-9 through 2-11		Removed the subsection on Pollutants of Concern, the Suggested Treatment Options Table, and Ability of Treatment Facilities Table.	Removed the Suggested Treatment Options Table and Ability of Treatment Facilities Table because they provided limited usefulness and removed the associated subsection, Pollutants of Concern.				
Chapter 3 - Treatment Facility Menus								
Chapter Introduction Paragraph	3-1		Additional guidance provided.	Added paragraph on emerging technology options.				
Section 3.2 Oil Control Menu	3-2 through 3-3		Revised list of options.	Removed catch basin inserts and added emerging stormwater treatment technologies. To date, no catch basin inserts have been approved though the TAPE process but Ecology has approved one emerging technology. Deleted the "Where Applied" section since it was duplicated from Chapter 2.				
Section 3.3 Phosphorous Treatment Menu	3-3 through 3-4		Revised list of options.	Removed amended sand filter (no design criteria have been developed for this treatment), and media filter, added emerging stormwater treatment technologies. Deleted the "Where Applied" section since it was duplicated from Chapter 2.				
Section 3.4 Enhanced Treatment Menu	3-5 through 3-7		Multiple revisions to remove outdated guidance and to provide new guidance. Revised list of options. Revised waters triggering enhanced treatment consistent with Chapter 2.	Revised the performance goal for dissolved metals. Removed Amended Sand Filter. Added "vegetated" to "Compost Amended "Vegetated" Filter Strip. Removed "rain garden" for consistency with proposal to distinguish between "bioretention" and "rain gardens." Replaced "Ecology Embankment" with "Media Filter Drain." Added emerging technologies. Deleted the "Where Applied" section since it was duplicated from Chapter 2.				
Section 3.5 Basic Treatment Menu	3-7 through 3-9		Minor language changes for clarity. Revised list of options.	Removed "rain garden" for consistency with proposal to distinguish between "bioretention" and "rain gardens." Replaced "Ecology Embankment" with "Media Filter Drain". Added Compost-amended Vegetated Filter Strip. Removed Bio-infiltration Swale. Added emerging technologies. Deleted the "Where Applied" section since it was duplicated from Chapter 2.				
Chapter 4 - General Requirements for Storm	water Facilities							
Section 4.1.1 Water Quality Design Storm Volume	4-1	Yes	Inserted updated modeling guidance.	New guidance more accurately describes how volume is determined by computer models.				

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments
Section 4.1.2 Water Quality Design Flow Rate	4-1 through 4-2		Minor language changes for clarity.	Revised language for clarity.
Section 4.1.3 flows Requiring Treatment	4-2 through 4-4		Minor language changes for clarity. Changes to incorporate new terms.	Replaced "impervious" surfaces with "hard" surfaces in coordination with general changes in terminology. Added guidance regarding pollution-generating hard surfaces, pollution-generating impervious surfaces, and pollution-generating pervious surfaces.
Section 4.6 Maintenance Standards for Drainage Facilities	4-31 through 4-53	Yes	Added new tables within overall set of operation and maintenance standards	Changed "StormFilter" to "Manufactured Media Filters", added information from WSDOT on Media Filter Drains and Compost Amended Vegetated Filter Strips. Minor additions to the recommended maintenance tables added. Added placeholders for Bioretention and permeable pavement pending completion of the development of LID maintenance standards grant.
Chapter 5 - On-Site Stormwater Management		T		
Section 5.1 Purpose	5-1		Additional guidance provided.	Add reference to expanded BMP options and LID Manual to acknowledge the expansion of Chapter 5 and source of additional design details (LID Manual).
Section 5.2 Application	5-1	Yes	Additional guidance provided.	Revised application to refer specifically to Minimum Requirements #5, #6, and #7.
Section 5.3 Best Management Practices for On-Site Stormwater Management	5-1 through 5-2		Additional clarifying guidance provided. Full list of BMPs provided.	Expanded the list of BMPs in sections 5.3.1 and 5.3.2. Revised language and references for clarity.
Section 5.3.1 On-site Stormwater Management BMPs	5-3 to 5-39	Yes	Amend existing BMP's add new BMP's	Downspout infiltration moved to Volume III. Revised BMP T5.11 Concentrated Flow Dispersion and BMP T5.12 Sheet Flow Dispersion. Updated figures. Added BMP T5.14A Rain Gardens and BMP T5.14B Bioretention but details are in Volume V of Chapter 7. Added BMP T5.15 Permeable Pavements, BMP T5.16 Tree Retention and Tree Planting, BMP T5.16 Vegetated Roofs, BMP T5.18 Reverse Slope Sidewalks, BMP T5.19 Minimal Excavation Foundations, BMP T5.20 Rainwater Harvesting. Revised BMP T5.30 Full Dispersion by incorporating details from previous Appendix III-C.
			Deleted Full Dispersion and costion 5.2.2	Moved Full Dispersion into Section 5.3.1 because the Municipal
Section 5.3.2 Site Design BMPs	5-39 through 5-42		Deleted Full Dispersion and section 5.3.3 Other Practices	Stormwater Permits make it a necessary option in MR #5. Clarifying statement added in BMP T5.40.
Chapter 6 - Pretreatment				
Section 6.1 Purpose	6-1		Minor language changes.	Removed "and media filtration" in first bullet for clarity.
Section 6.2 Application	6-1		Additional guidance provided.	Added discussion that there are emerging technologies approved for pretreatment.
Section 6.3 Best Management Practices (BMPs) for Pretreatment	6-1		Additional guidance provided.	Added reference to Chapter 12.
Chapter 7 - Infiltration and Bioretention Treat	ment Facilities	T		
Section 7.1 Purpose	7-1		Changed bioinfilltration to bioretention.	Updated listed BMPs and made minor revisions to text.
Sections 7.2 General Considerations	7-1		Additional guidance provided.	Renamed this Section and added information regarding Bioretention and Rain Gardens.
Sections 7.3 Applications	7-1 through 7-2		Additional guidance provided.	Renamed this Section and added information for the BMPs discussed in this chapter.

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments	
Section 7.4 and BMPs 7.10 & 7.20	7-2		Updated references to Volume III	Design details for these BMPs remain in Volume III.	
BMP T 7.30 Bioretention Cells, Swales, and Planter Boxes	7-3 through 7-25		Replaced Bio-infiltration Swale with Bioretention Cells, Swales, and Planter Boxes.	Added detailed guidance, design criteria, infeasibilty criteria and figures for Bioretention Cells, Swales, and Planter Boxes.	
BMP T7.40 Compost-amended Vegetated Filter Strips (CAVFS)	7-25 through 7-29		Transferred this BMP from Chapter 9.	Added guidance and design criteria for Compost-Amended Vegetated Filter Strips. Treatment via infiltration through amended soils.	
Chapter 8 - Sand Filtration Treatment Facilities	es				
Chapter 8 - Filtration Treatment Facilities	8-1 through 8-39		Changed title and introduced minor language changes for clarity.	Revised name from Sand Filtration to just Filtration.	
8.1 Purpose	8-1		Revised guidance.	Revised the purpose to apply to both sand and media filtration facilities.	
8.2 Description	8-1		Additional guidance provided.	Added reference to Media Filter Drain to description.	
Section 8.3 Performance Objectives	8-2		Included new technologies	Added Media Filter Drain to list of approved technologies. Clarified objective for sand filters.	
Section 8.4 Applications and Limitations	8-2		Revised guidance.	Revised to include media filter drains.	
Section 8.5 Best Management Practices (BMPs) for Sand Filtration / BMP T8.10 Sand Filter Basin	8-2 to 8-15		Renamed and reorganized section. Additional guidance provided.	Added design criteria for sand filter basins. reorganized section so that previous sections 8.5, 8.6, 8.7, & 8.8 become subsections under BMP T8.10.	
BMP T8.11 Large Sand Filter Basin	8-16 through 8-17		Separated out BMP previously reference within BMP T8.10	BMP T8.11 Large Sand Filter Basin was described in the prior manual under BMP T8.10 Sand Filter Basin. The Large Sand Filter was given a separate BMP for clarity.	
BMP T8.20 Sand Filter Vault	8-17 through 8-23		Additional guidance provided.	Added design criteria, construction criteria, and maintenance criteria for sand filter vault.	
BMP T8.40 Media Filter Drain	8-24 through 8-38		Added this BMP.	Added design criteria for new Media Filter Drain (MFD) option (previously referred to as Ecology Embankment). Text matches WSDOT Highway Runoff Manual.	
Chapter 9 - Biofiltration Treatment Facilities					
Chapter 9 - Biofiltration Treatment Facilities	9-1 through 9-26		Minor language changes for clarity.	Minor language changes for clarity throughout the chapter.	
Section 9.4 Best Management Practices	9-1 through 9-26		Additional guidance provided and outdated guidance removed.	Revised list of BMPs. Revised Sizing Criteria table for clarity.	
BMP T9.50 Narrow Area Filter Strip	N/A		Removed this BMP.	No design criteria exists for this BMP to validate basic treatment. Designers should refer to Basic Filter Strip.	
Chapter 10- Wetpool Facilities		T			
BMP T10.10 Wet Pond	10-1 through 10-17		Minor language changes for clarity.	First cell must be lined to be consistent with liner requirements in Chapter 4. Added cell requirements for consistency with design criteria for 2-cell ponds. Definition of WQ Design Storm Volume amended.	
Chapter 11 - Oil and Water Separators					
BMP T11.10 API (Baffle type) Separator Bay	11-8 through 11-9		Corrected formula.	Corrected Stokes Law equation for rise rate.	
BMP T11.11 Coalescing Plate (CP) Separator Bay	11-10 through 11-11		Corrected formula.	Corrected the equation to calculated the projected (horizontal) surface area of plates.	
Chapter 12 - Emerging Technologies					
Chapter 12 - Emerging Technologies	12-1 through 12-6		Replaced sections 12.1 through 12.5 with new guidance.	Replaced sections 12.1 through 12.5 to provide new guidance on the Technology Assessment Protocol (TAPE) review and approval process.	

Location	Approximate Page Numbers	Change Tied to Permit Language	Change	Reasoning or Comments			
Section 12.6 Examples of Emerging Technologies for Stormwater Treatment and Control	N/A		Removed examples of emerging technologies.	Removed examples of emerging technologies. Added some examples previously listed throughout this volume.			
Appendix V-B Recommended Procedures for ASTM D 2434							
Appendix V-B Recommended Modifications to ASTM D 2434 When Measuring Hydraulic Conductivity for Bioretention Soil Mixes.	B-1 through B-2		Additional guidance provided.	Added Recommended Modifications to ASTM D 2434. The results of this test for saturated hydraulic conductivity can be influenced by how the general procedures in the ASTM method are implemented. This appendix lays out more specific procedures to help with consistency in evaluating soils used for bioretention.			
Appendix V-C Geotextile Specifications							
Appendix V-C Geotextile Specifications	C-1 through C-3		Revised Guidance.	Corrected several test procedures and geotextile property requirements.			
Appendix V-E Recommended Bioretention Plant Species							
Appendix V-E Recommended Newly Planted Tree Species	E-1 through E-5		New appendix pertinent to BMP T5.16	Lists of species from City of Seattle guidance.			