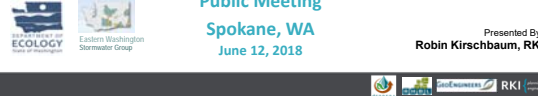


2018 Stormwater Management Manual for Eastern WA Update

**Public Meeting
Spokane, WA
June 12, 2018**

Presented By:
Robin Kirschbaum, RKI



Meeting Objectives

- Review project history and status
- Review draft SWMMEW update
 - Requirements/Guidance that has not changed
 - Key changes by chapter
- Answer any initial questions about the draft SWMMEW
- Discuss review process




Photo courtesy of Jan Morrow, City of Ellensburg

Project Team

Ecology:


- Abbey Stockwell (Project Manager)
- Doug Howie
- Bill Moore
- Amanda Heye
- Vince McGowan

Consultant Team:

- Rebecca Dugopolski, Herrera (Project Manager)
- Robin Kirschbaum, RKI
- Erick Fitzpatrick, AHBL
- Jon Rudders, GeoEngineers
- Jay Slagle, MadSkills
- Christine Sophos, CMS Writing & Editing Services

Eastern WA Steering Committee:

- Colleen Little, Spokane County (Chairperson)
- Danielle Mullins, City of West Richland
- Tom Wachholder, City of East Wenatchee
- Jon Morrow, City of Ellensburg
- Shilo Sprouse, City of Pullman
- Mark Melton, City of Richland
- Adrienne Pearson, City of Spokane
- Heather Killinger, Grant Conservation District
- Brad Daly, City of Walla Walla
- Seth Walker, Walla Walla County
- David Haws, Yakima County
- Alex Nguyen, WSDOT
- Dean Smith, Department of Corrections
- Jennifer Lange, Douglas County





Project Overview



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Mission Statement

“Complete a focused update of the Manual via an open and collaborative process to include the latest advances in stormwater management, needed clarifications, and improved ease of use.”

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Project Objectives

- Complete a focused update of the Manual
- Open and transparent public process
- Work closely with the Eastern Washington Steering Committee
- Promote public participation to solicit feedback and help improve adoption and use of the Manual
- Provide a user-friendly on-line version of the Manual

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Project Phasing

Phase 1 – 2015-17 Biennium (through 6/30/17)

- Task 1 – Entrance Conference
- Task 2 – Project Kickoff Meeting
- Task 3 – Major Project Workshop
- Task 5A – Quality Control
- Task 6A – Updates to the Stormwater Manual
 - Issue tracking log spreadsheet summarizing and organizing input received
- Task 7A – Public Involvement
 - Newsletter
 - Website
 - Webinar

Phase 2 – 2017-19 Biennium (7/1/17 through 10/31/18)

- Task 4 – Coordination Meetings with Ecology and the Steering Committee
- Task 5B – Quality Control
- Task 6B – Updates to the Stormwater Manual
 - Full Working Draft
 - Internal Public Review Draft
 - **External Public Review Draft**
 - Final Draft Manual
 - Final Manual
- Task 7B – Public Involvement
 - Newsletter (2)
 - **Public meeting #1 - Spokane**
 - Public meeting #2 - Richland
 - Webinar

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Phase 2

Key Milestone Schedule

Date	Work Product or Meeting
11/22/17 – 11/28/17	Full Working Draft Manual to Steering Committee
12/5/17	Steering Committee conference call (Chapter 1 and Glossary)
12/12/17	Steering Committee conference call (Chapter 2)
1/4/18	Steering Committee conference call (Chapters 3 and 4)
1/11/18	Steering Committee conference call (Chapter 5)
1/17/18	Steering Committee conference call (Chapter 6)
1/24/18	Steering Committee conference call (Chapters 7 and 8)
2/2/18	Steering Committee comments on the Full Working Draft Manual due
3/2/18 – 3/6/18	Public Review Draft Manual (internal to Steering Committee)
4/25 & 4/26/18	Steering Committee meeting (Moses Lake)
4/26/18	Steering Committee comments on the Updated Working Draft Manual due
5/25/18	Public Review Draft Manual
6/12/18	Public Meeting (Spokane)
6/26/18	Public Meeting (Richland)
7/10/18	Public Meeting (webinar)
7/25/18	Public Comments Due on the Public Review Draft Manual
8/9/18 (proposed)	Steering Committee meeting (Moses Lake)
10/31/18	Final Manual – online version posted on Ecology's website

Legend

- Deliverable
- Meeting
- Comments Due

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Opportunities for Public Input

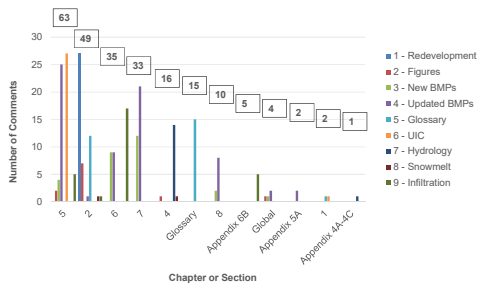
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Comments Received to Date

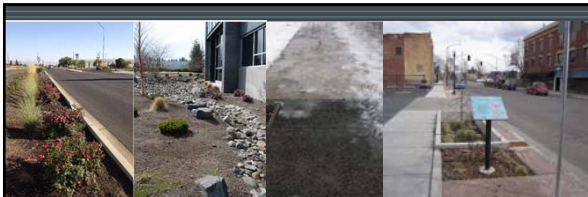
Meeting/Review Stage	Date	Number of Participants	Number of Comments
Project Kickoff Meeting	5/22/17	28	46
Project Webinar	6/27/17	53	61
Draft Manual Sections	10/12/17	3	20
Revised Draft Manual Sections	11/3/17	6	37
S.C. Meeting Follow-up	9/28/17	Various	10
S.C. Conference call follow-up	12/5/17 through 1/17/18	Various	16
Working Draft Manual	2/2/18	9	150
Various (consultant team, direct outreach, etc.)	Various	Various	206
Internal Public Review Draft	4/26/18	(in progress)	(in progress)
			546 total comments

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Comments Received to Date



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Manual Updates



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Public Review Draft

Not changed



Example 2-year, 24-hour Isopluvial Map (unchanged from 2004 SWMMEW)

- Core Elements
- Thresholds for new and redevelopment
- Design storms
- Isopluvial maps

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Public Review Draft

Key Changes

Chapter 1 - Introduction

- Clarified regulatory and permit requirements
- Added WSDOT link for latest available data on highway stormwater runoff



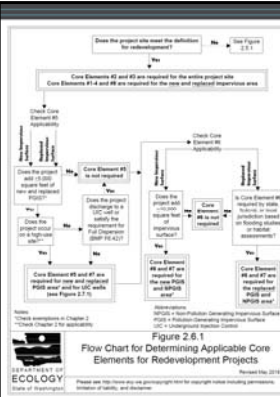
14

Public Review Draft

Key Changes

Chapter 2 – Core Elements for New Development and Redevelopment

- Shifted exemptions forward, clarified where needed
- Updated and shifted definitions
- Modified flow charts to clarify core element applicability
- Expanded list of responsibilities for local jurisdictions
- Incorporated errata



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Public Review Draft

Key Changes

Chapter 3 – Preparation of Stormwater Site Plans

- Provided more direction on preparation of a Stormwater Site Plan
- Added guidelines for Small Project Construction Stormwater Pollution Prevention (formerly BMP C180 in Chapter 7)
- Incorporated the LID site planning guidelines from the Eastern WA LID Manual into Appendix 3D



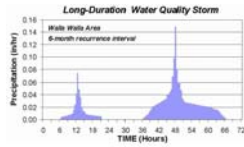
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Public Review Draft

Key Changes

Chapter 4 – Hydrologic Analysis and Design

- Added new tables summarizing the advantages, disadvantages, and applicability for:
 - Hydrologic analysis methods
 - Average annual precipitation
 - Design storm distributions
- Various streamlining edits
- Moved hyetographs to Appendix 4D



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Public Review Draft

Key Changes



Photo courtesy of AHBL (Source: 2013 Eastern WA LID Manual)

Chapter 5 – Runoff Treatment BMP Design

- Updated BMP Template
 - Added tables summarizing BMP applicability
 - Streamlined the stepwise procedure for BMP design in text and tables
 - Added cold weather, arid, and semi-arid climate considerations
- Incorporated errata for oil control guidance
- Clarified metals treatment requirements
- Updated Site Suitability Criteria
- Added screening criteria for infiltration BMPs
- Added BMPs:
 - Bioretention
 - Permeable Pavement
 - Compost-Amended Vegetated Filter Strip (CAVFS)
 - Media Filter Drain

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Public Review Draft Key Changes

Chapter 5 – Runoff Treatment BMP Design (cont.)

- Updated BMP TS.100: API (baffle type) Separator Bay design criteria
- Incorporated updated UIC guidance
- Updated Emerging Technologies for alignment with the SWMMWW and TAPE
- Added new appendix with planting recommendations for vegetated BMPs



Photo courtesy of Jon Morrow, City of Ellensburg

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Public Review Draft Key Changes



Photo courtesy of AHBL (Source: 2013 Eastern WA LID Manual)

Chapter 6 – Flow Control BMP Design

- Updated BMP Template (same as Chapter 5)
- Added BMPs from the Eastern WA LID Manual
 - Rain Water Harvesting
 - Permeable Pavement
 - Amending Construction Site Soils
 - Trees
 - Vegetated Roofs
 - Minimal Excavation Foundations
- Updated dispersion BMP design guidance based on WSDOT HRM

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Public Review Draft Key Changes

Chapter 6 – Flow Control BMP Design (cont.)

- Updated guidance for determining design infiltration rates
- Updated Appendix 6B (Storm Drainage Design Guideline for Site Characterization) to add:
 - Small-Scale Pilot Infiltration Test (PIT)
 - Large-Scale PIT
 - Recommended laboratory procedures



Photo courtesy of AESI for the Ballard Natural Drainage System Project

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Public Review Draft
Key Changes




Photo courtesy of Herrera

Chapter 7 – Construction Stormwater Pollution Prevention

- Added 13th element (Protect LID BMPs [Infiltration BMPs])
- Incorporated errata
- Edits to align with the SWMMWW ("E" flag for EWA specifics)
- Added BMPs:
 - Material Delivery, Storage, and Containment
 - Concrete Washout Area
 - Vegetative Filtration
 - Treating and Disposing of High pH Water
- Removed BMPs:
 - Stake and Wire Fence
 - Payment of Erosion Control Work
 - Straw Bale Barrier

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Public Review Draft
Key Changes

Chapter 8 – Source Control

- Added BMP numbering
- Edits to align with the SWMMWW ("E" flag for EWA specifics)
- Added BMPs for:

○ Formation of a Pollution Prevention Team	○ Temporary Fruit Storage
○ Good Housekeeping	○ Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing
○ Pools, Spas, Hot Tubs, and Fountains	○ Well, Utility, Directional and Geotechnical Drilling
○ Dock Washing	○ Roof Vents
○ Color Events	○ Nurseries and Greenhouses
○ In-Water Fueling	




Photo courtesy of Herrera

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Public Review Draft
Key Changes


Glossary

- Deleted unused terms
- Updated definitions for consistency with the Eastern WA Phase II Permit
- Updated definitions based on errata
- Added applicable terms from the SWMMWW and the Eastern WA LID Manual


Bibliography

- Added applicable references from the SWMMWW, WSDOT HRM, and Eastern WA LID Manual

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Discussion



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THANK YOU!

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