

Kitsap County Planning Commission Work-Study Briefing

Code and Stormwater Design

Manual Update

Presented By:

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- Robin Kirschbaum / **RKI**



May 19, 2020



Presentation Overview

- History of 2016 updates
- Why now?
- Summary of Ecology changes
- Summary of Kitsap County changes
- Public outreach process
- Discussion and next steps



Whispering Firs Stormwater Park, Silverdale, WA

Photo Courtesy: Michele Filley, Kitsap County Public Works



Acknowledgements

Stormwater Design

Manual/Code Update:

Kitsap County DCD

Kitsap County Public Works

Herrera Environmental Consultants

Robin Kirschbaum, Inc.

Public Industry

Participation:

Axis Land Consulting, LLC

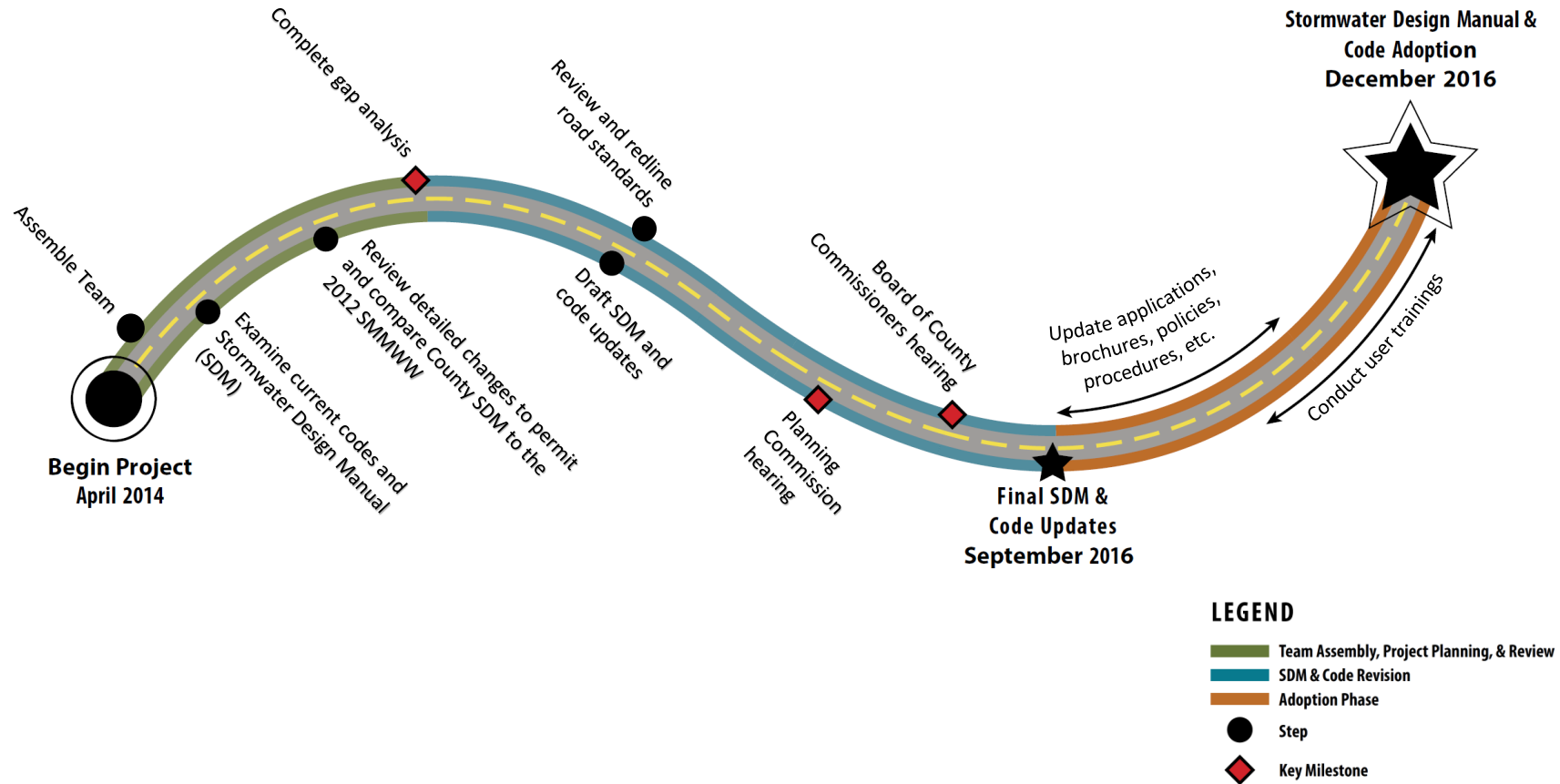
Kitsap Building Association



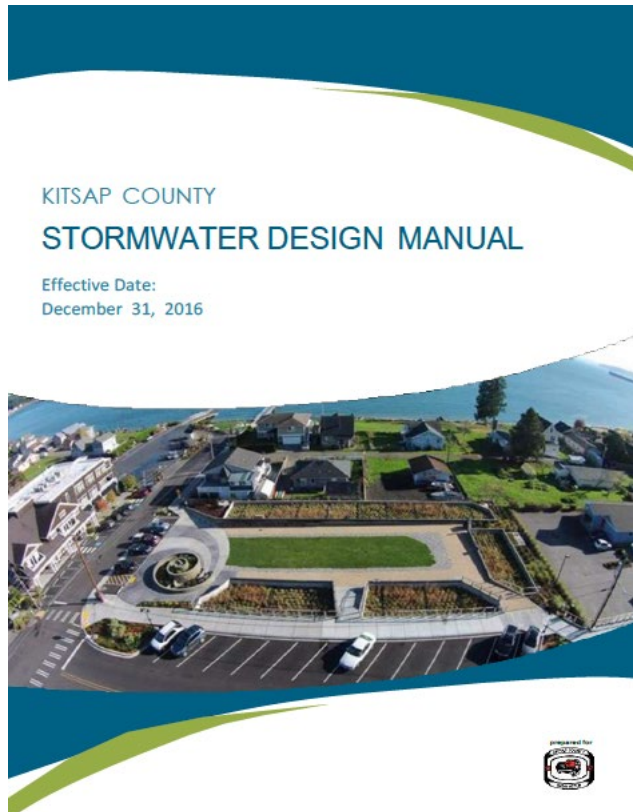
*Photo Courtesy:
Chis May, formerly Kitsap County Public Works*

History

2016 Code & Manual Update



Key Changes in 2016



- Code
 - Updated Titles 12, 16, and 17
 - Goal:
 - Make LID preferred and commonly used approach to development
 - Reduce vegetation loss, impervious surfaces, and stormwater runoff
- Manual
 - Extensive update
 - Incorporated LID planning and design into Manual
 - Consistency with Ecology
 - Updated submittal requirements

Why Now?

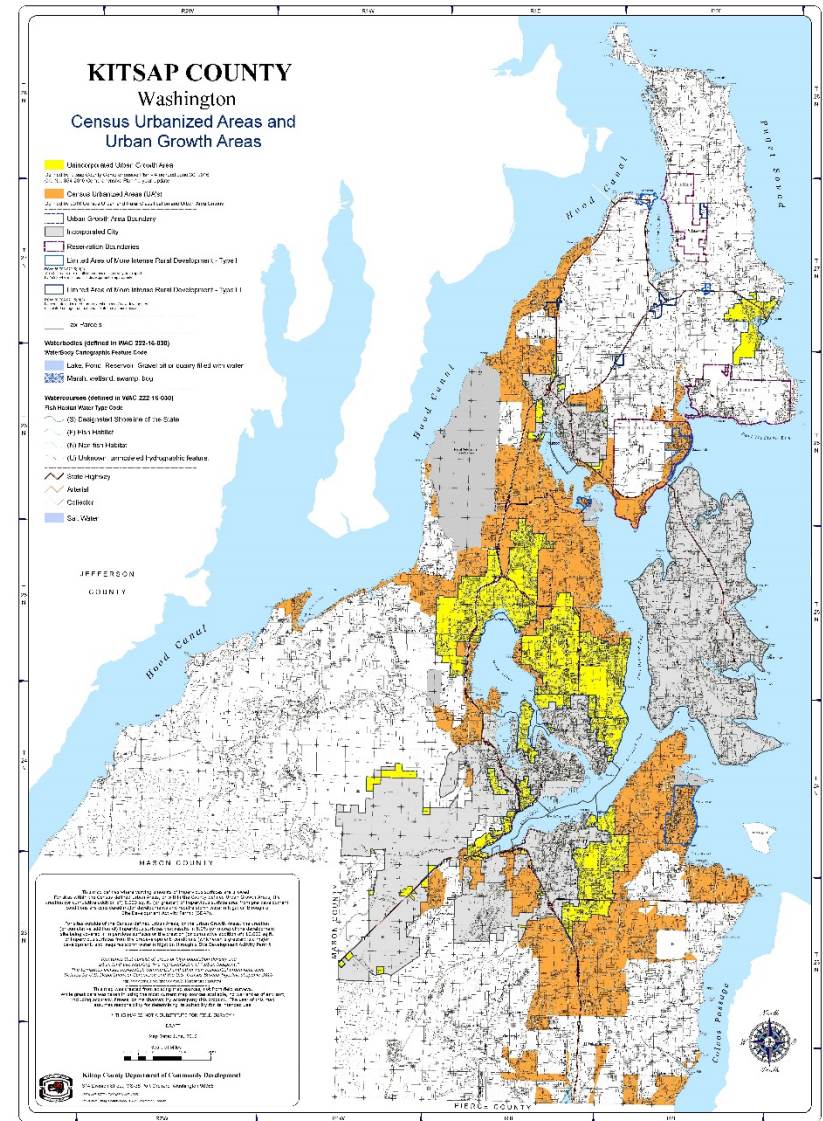
- Clean Water Act
- Ecology Updates
 - Phase II NPDES Permit
 - Issued July 1, 2019
 - Effective August 2019
 - Expires July 31, 2024
 - 2019 Stormwater Management Manual for Western Washington (Ecology Manual)
- Water is a Resource Policy



NE Geneva Street, Suquamish, WA

Phase II NPDES Permit

- Kitsap County designated as Phase II permittee
- Applies to MS4 within:
 - Census Urbanized Areas
 - Urban Growth Areas, including those adjacent:
 - Poulsbo
 - Bremerton
 - Port Orchard



Water is a Resource Not a waste stream

Storm and surface water runoff is the leading transporter of pollution into Puget Sound and local wetlands, creeks, streams and rivers. The majority of pollution comes from residential land use and the public infrastructure that supports those uses. Kitsap County has developed a series of guiding principles to limit our contribution to pollution and preserve water as a resource rather than treating it a waste stream.



Kitsap County pledges to:

- Preserve natural hydrology by preventing the creation of stormwater runoff and ensuring that runoff is free of pollutants.
- Conserve groundwater resources through infiltration, conservation and pursuing alternative sources for non-drinking water.
- Reduce pollutant loading of ground and surface waters by reducing surface flow volumes and incorporating non-polluting products or processes wherever possible.
- Use land for multiple purposes by maintaining forests and open space, integrating stormwater management features into the landscape, and encouraging practices that can be used for purposes beyond just stormwater management.
- Refine management to reflect latest technology and innovations by searching for scientific research and market advances, and integrating findings into operations and regulations.
- Educate employees, customers, citizens and contractors on how their actions can impact water quality.
- Provide incentives to promote actions that support these principles.

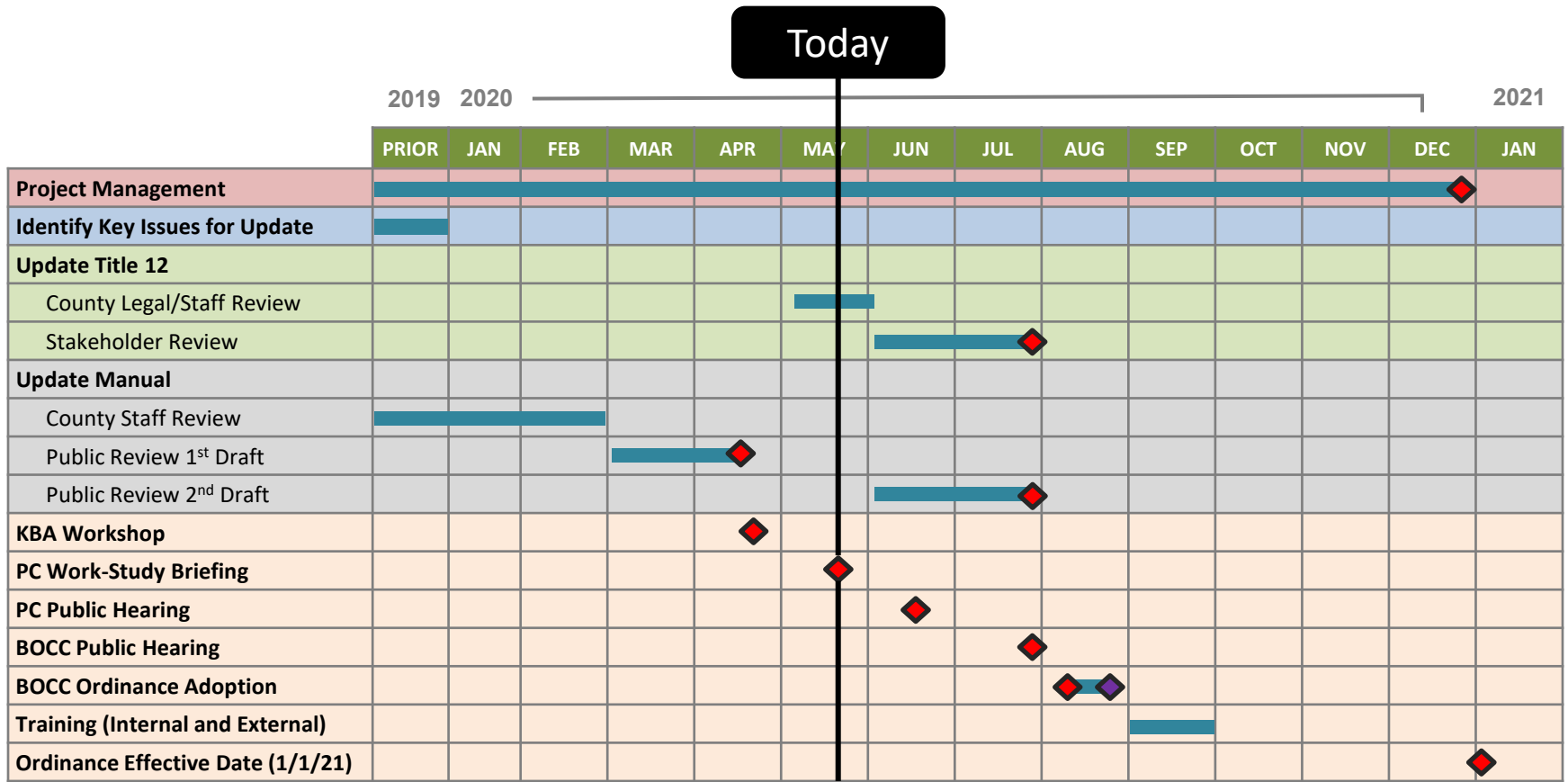


Water is a Resource Policy Key Tenants

- Preserve natural hydrology
- Conserve groundwater resources
- Reduce pollutant loading
- Refine management to reflect latest technology and innovations



Schedule



◆ Planned Milestone Date ◆ Contingency Milestone Date

Ecology Updates

2019 Ecology Manual

- Usability enhancements
 - Online Manual
 - Consolidation/clarification/reorganization for better flow
- Updated continuous simulation modeling requirements
- Replaced hard surfaces redevelopment threshold and equivalent area definitions

Stormwater Management Manual for Western Washington



July 2019



DEPARTMENT OF
ECOLOGY
State of Washington

Publication Number 19-10-021



RKI { planning
engineering

Stormwater Management Manual for Western Washington



July 2019



Publication Number 19-10-021

Ecology Updates

2019 Ecology Manual (Continued)

- Updated Minimum Requirement (MR) 2, 5, and 7
- New Source Control BMPs
- Updated wetlands guidance
- Incorporation of UIC Program guidance
- Expanded guidance for regional facilities



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Kitsap County Manual Updates (DRAFT)

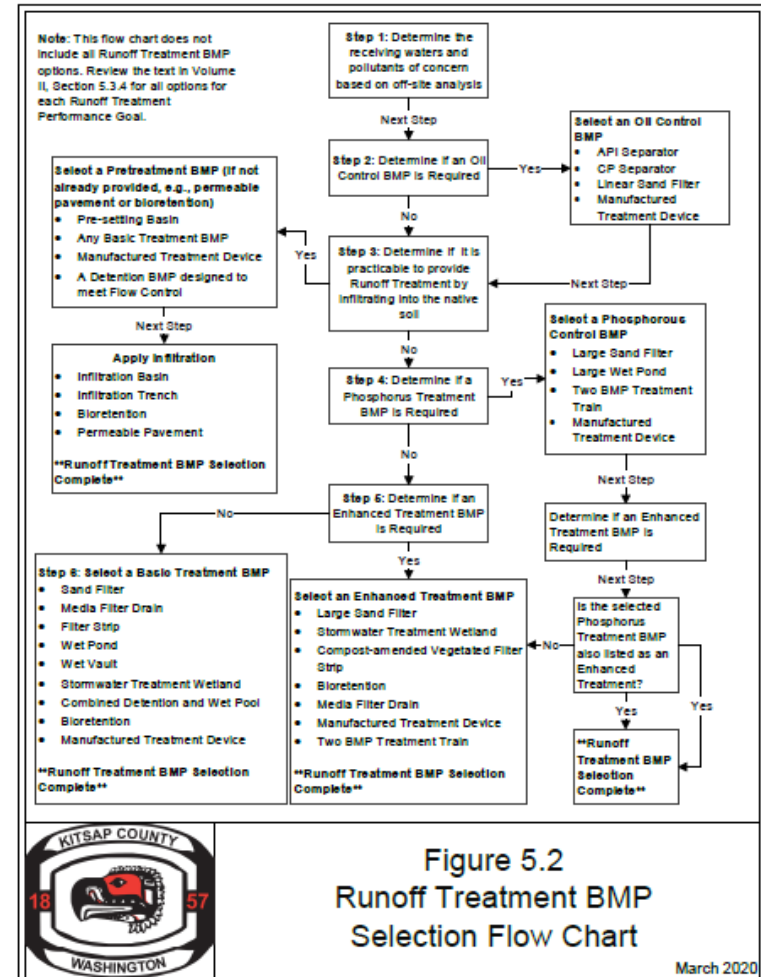
Summary of Key Changes



- Online Manual
- Volume I
 - Updated Minimum Requirements flowcharts
 - Updated MR 2, 5, 6, 7, and 8 (for consistency with Ecology)
- Volume II
 - Ch 1-4
 - Updated submittal requirements
 - Added local amendments for 4 source control BMPs
 - Clarified approved continuous models
 - Updated design criteria for pipes, outfall features, and tightline systems
 - Added figures

Kitsap County Manual Updates (Continued)

- Volume II (Continued)
 - Ch 5 – Stormwater Management BMPs
 - Updated Runoff BMP Selection flow chart
 - Clarified dispersion flow path requirements
 - Updated infiltration BMP setback requirements
 - Added section on Runoff Treatment Prior to Infiltration BMPs
 - Added section on BMPs Classified as UICs
 - BMP design criteria updates



Kitsap County Manual Updates (Continued)

Example BMP Design Updates

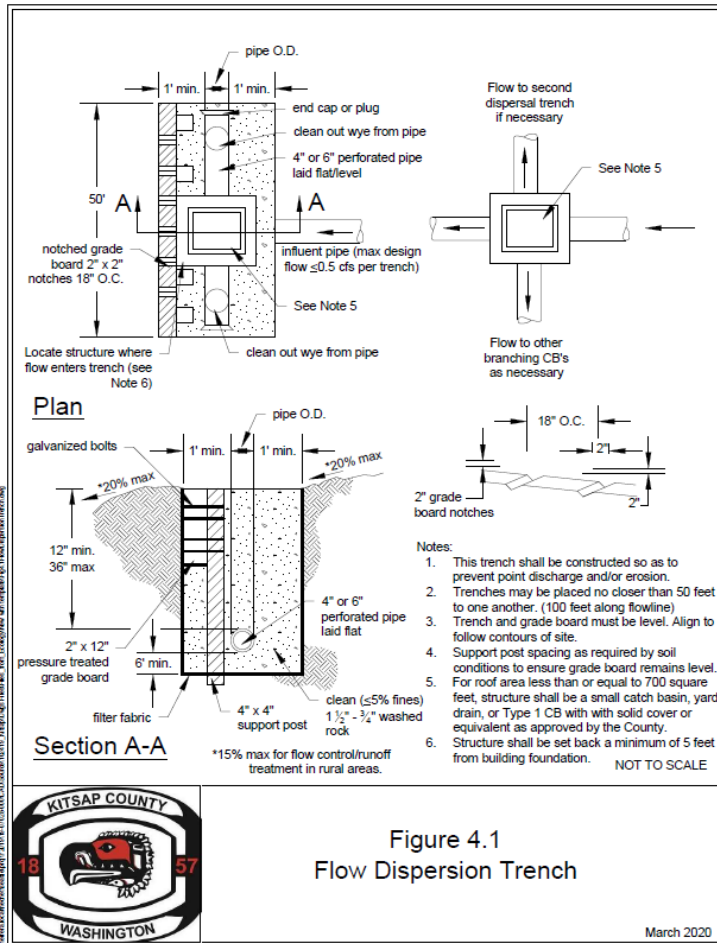


Figure 4.1
Flow Dispersion Trench

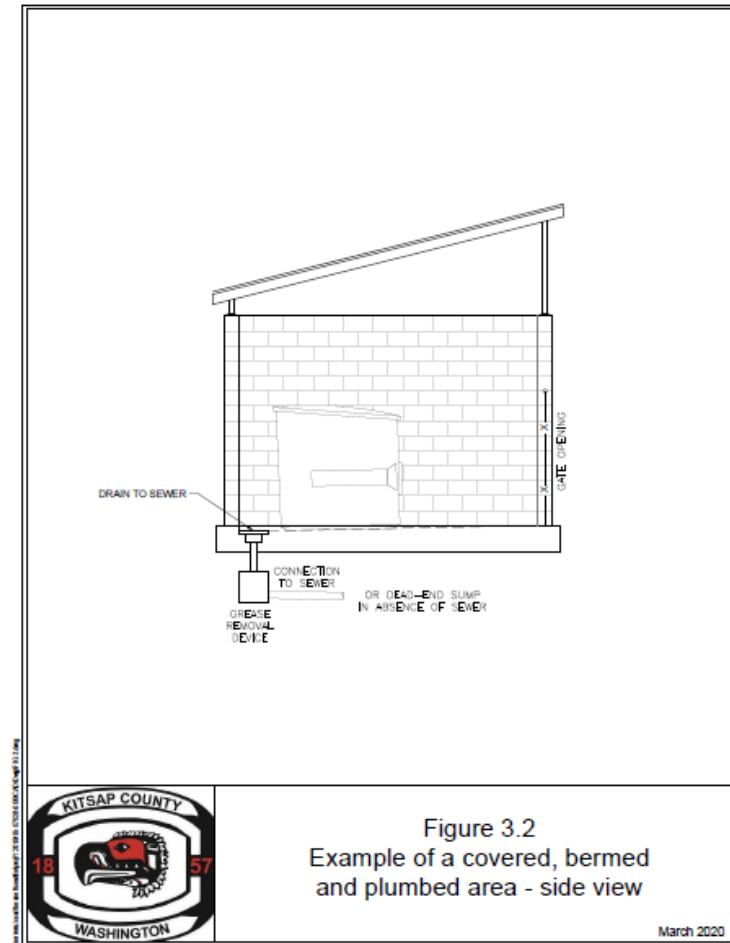
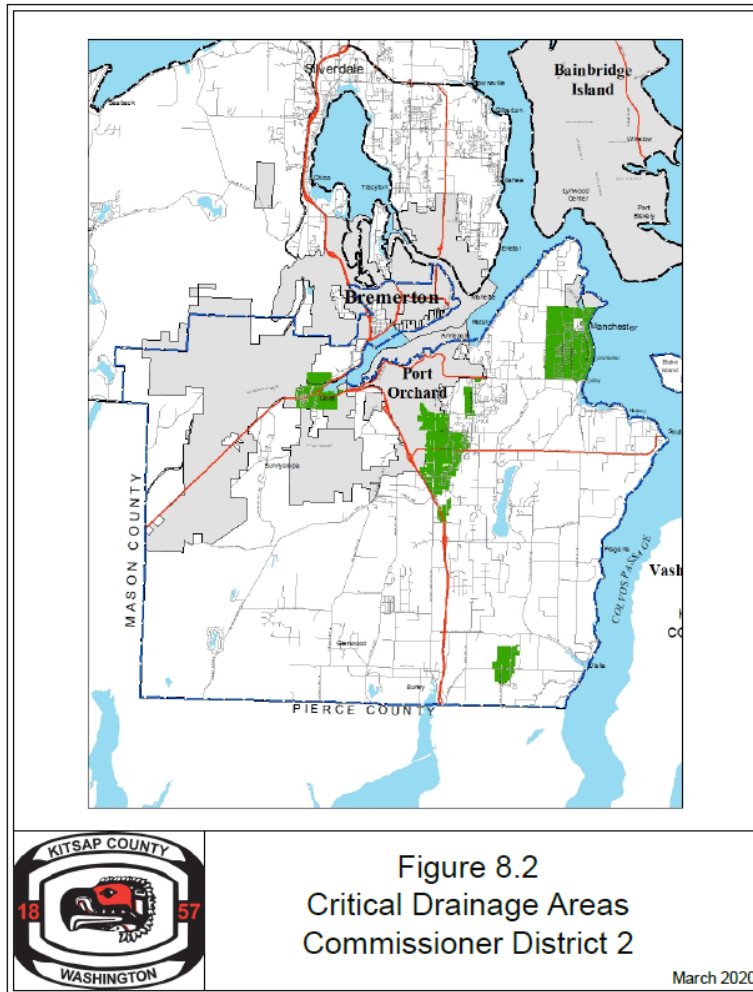


Figure 3.2
Example of a covered, bermed
and plumbed area - side view



Kitsap County Manual Updates (Continued)



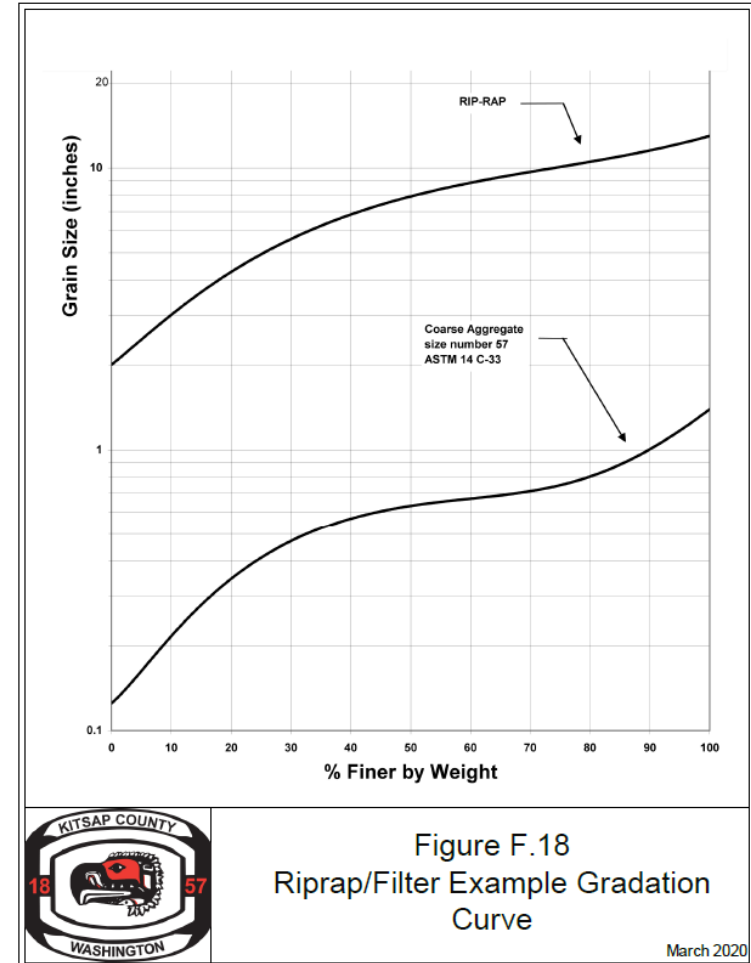
- Volume II (Continued)

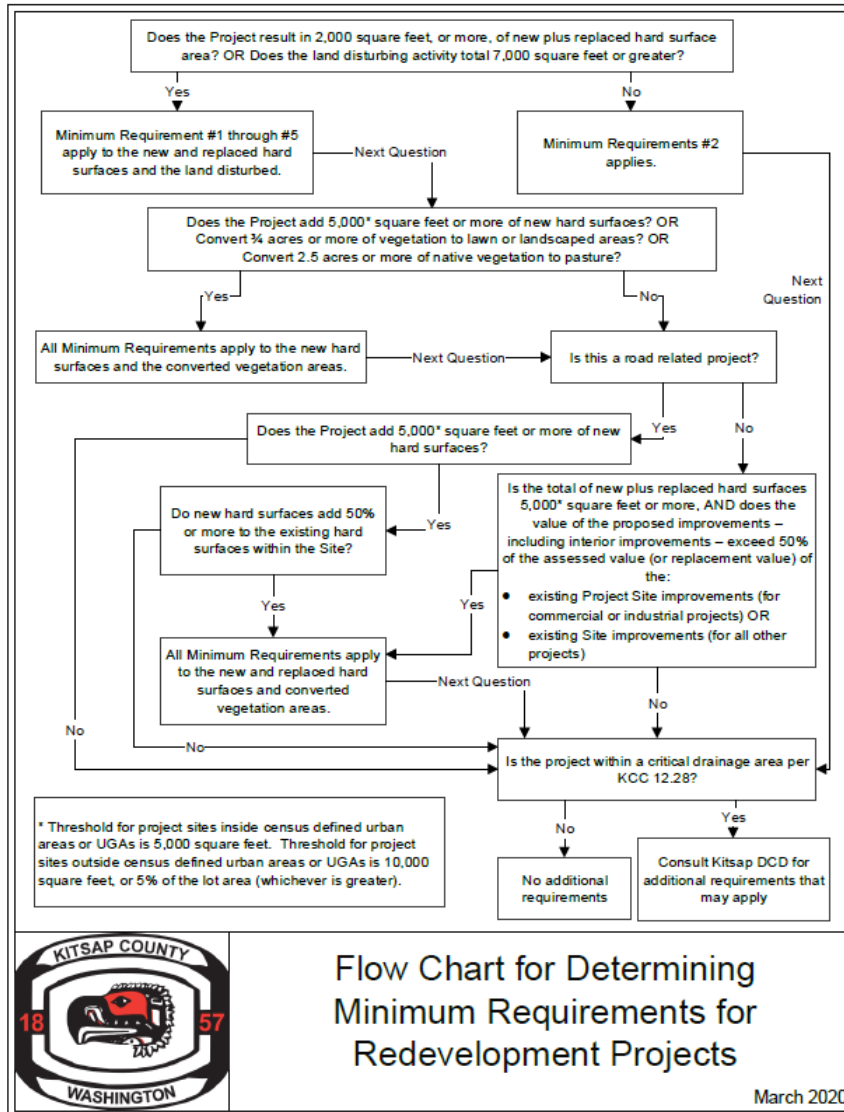
- Ch 6 – Wetlands Protection
 - Updated reference to Ecology' updated wetland protection criteria
- Ch 7 and 9
 - Minor revisions
- Ch 8 – Critical Drainage Areas
 - Updated critical drainage area figures
 - Updated modeling guidance for closed depressions



Kitsap County Manual Updates (Continued)

- Glossary
 - Added definitions and acronyms
- Appendix F – H/H Modeling
 - Incorporated tables and figures (from 2010 Manual)
- Appendix G – Subsurface Investigation and Infiltration Testing for Infiltration BMPs
 - Updated terminology and references
 - Added UIC well language for consistency with Ecology
 - Updated procedural guidelines for clarity
- Appendix H – LID BMP Infeasibility Criteria
 - Updated infeasibility criteria for consistency with Ecology





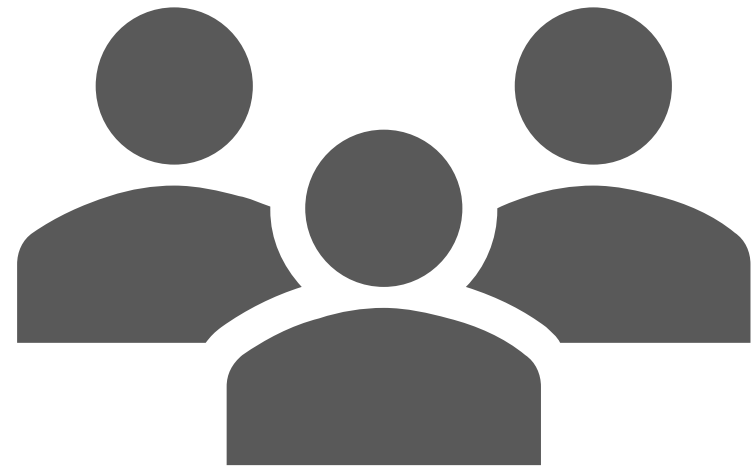
Title 12 Updates

- Housekeeping
 - Definitions
 - Updated code references
- Consistency
 - Updated Manual
- Public Draft to be published June 5

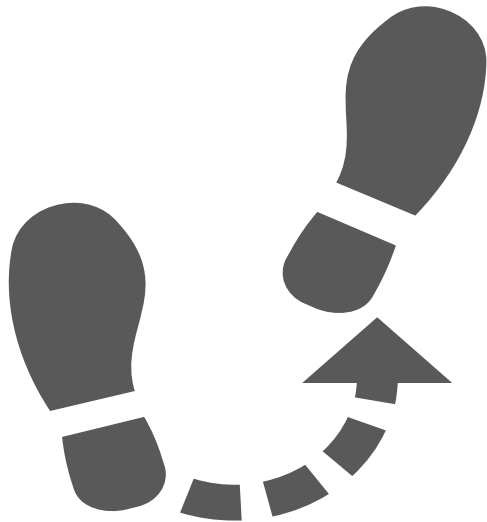


Public Outreach Process

- Local community engagement
 - Engineering
 - Key input on issues and approach - Axis Land Consulting LLC
 - Building
 - 4/20/20 workshop
- March Public draft made available
 - GovDelivery blasts
 - Sent to KBA leadership



Next Steps



- **June 2020:**
 - 2nd Draft Manual and Title 12 release
- **July 2020:**
 - Begin legislative process
- **September 2020:**
 - Begin internal and external trainings
- **January 2021:**
 - Ordinance Effective Date



Discussion



THANK YOU!

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