

City of Edgewood – LID Review and Revision Summary

Participants:

- Jeremy Metzler, PE – Senior Engineer / Surface Water Program Manager
 - Manages the City’s Surface Water Utility, reviews surface water plans for all development proposals / applications, and coordinates policy with stakeholders
- Kevin Stender – Community Development Director
 - Manages the planning and development department, updates development codes, oversees the Planning Commission, and reviews private development permits for approval
- Aaron Nix, MPA – Assistant City Administrator, Municipal Services
 - Serving as Acting Public Works Director, he is responsible for public works projects and development, while overseeing all City utilities, including surface water
- Edgewood Planning Commission
 - Appointed citizen committee that oversees planning and development codes, coordinates with staff, provides opportunities for public input, and forwards recommendations to the City Council
- Edgewood City Council
 - Elected citizen board that reviews recommendations, provides opportunities for public input, and adopts regulations through ordinance
- Daryl Eidinger – Mayor
 - Elected chief executive officer, overseeing City staff and City Council Chair

Codes, rules, standards, and other enforceable documents reviewed:

- Edgewood Municipal Code (EMC), per Ordinances #05-259 and #10-345
- Western Washington Phase II Municipal Stormwater Permit, effective 8/1/13
- 2012 Department of Ecology SMMWW, as amended in 2014
- 2015 Pierce County Stormwater Management and Site Development Manual (PCM)

Revisions made to above documents:

- EMC Titles 13, 14, 15, 16, 18, and 20, through Ordinance #16-482
 - Summary attached, adopting 2015 PCM
- “*Storm Drainage Minimum Design Requirements for Small Projects*” handout
 - see “Results of Education and Outreach” component
- Other development handouts (available on City website)

Summary of LID Incorporation into EMC						
EMC Title	13	14	15	16	18	20
Minimize Impervious Surface	X				X	
Minimize Loss of Native Vegetation	X				X	
Other Measures to Minimize Stormwater Runoff	X	X	X	X	X	X

Edgewood Municipal Code Section	Description of Proposed Amendment	Purpose
12.02.010	Replace AASTHO "5th Edition, 2004" with "6th Edition, 2011"	Update reference to current guidance
Title 13	Set Title to "Surface Water Management and Site Development"	Current title, "Water and Sewers", is misleading - title contains no regulations regarding water distribution or sanitary sewer collection systems
Throughout Title 13	Replace "SMMWW" with "PCM"	Updating references as needed for consistency
13.05.001	Adding language to emphasize the environment's importance	Clarification per NPDES Phase II Municipal Stormwater Permit
13.05.010	Clarifies that projects submitted for city review prior to effective date of this amendment must still meet prior regulations.	For consistency with current policies
13.05.020	Add definition for "PCM", update "SMMWW"	Updating references as needed for consistency
13.05.030	Update application and permit issuance procedures, provide clear direction regarding Community Development Director's responsibility to protect adjacent properties	For consistency with already-adopted policies and current NPDES Phase II Municipal Stormwater permit requirements
13.05.040	Change sentence order, mentioning exceptions first instead of last	Clarifying there may be exceptions to the need for a professional, consistent with current policy
13.05.050	Add "prior to permit issuance" to additional review fees	Clarify that all fees are due prior to permit issuance, per current policy
13.05.120	State when an environmental checklist is required, and require submittal of pertinent reports with application	Clarify requirements for application materials, per current policies
13.05.130	Revise date to November 15, 2016	Update reference to this amendment's effective date
13.05.160	Revise title	Updating references as needed for consistency
Throughout 13.05.170	Replace any reference to "County" or "Pierce County" with "City" or "City of Edgewood"	Updating references as needed for consistency
	Replace any reference to "Planning and Land Services (PALS)" with "Community Development Department"	
	Replace any reference to "PCC Title 18E" with "EMC Title 14", and other PCC references as needed for consistency. Other references to PCC shall remain unless otherwise noted.	
	Updating addresses, phone numbers, website addresses, and other applicable contact information to reference City of Edgewood resources.	
13.05.170	In addition to Minimum Requirements #2 and #4 (as required by PCM and DOE), all projects must meet #5 to implement LID to the maximum extent feasible	Clarification per the 2015 PCM and NPDES Phase II Municipal Stormwater Permit, with addition of #5 to implement LID to the maximum extent feasible
	Update list of exemptions to match Pierce County Code Title 17A and PCM	Clarification consistent with the 2015 PCM
	Emergency projects are exempt from permit prior to work, but must either restore site or comply with permit requirements within 60 days of emergency resolution.	Clarification per the 2015 PCM and other existing code sections
<i>PCM Vol 1, Chapter 1.7.4</i>	Replace Phase I NPDES Permit discussion with Phase II Permit info	Updating references as needed for consistency
<i>PCM Vol. 1, Chapter 2.3.1</i>	No amendments proposed	Removing extremely low thresholds for new development listed in current code, following thresholds listed in PCM (standard industry practice)
<i>PCM Vol. 1, Chapter 2.3.2</i>	No amendments proposed	Removing extremely low thresholds for re-development listed in current code, following thresholds listed in PCM (standard industry practice)
<i>PCM Vol. 1, Chapter 2.4.1</i>	No amendments proposed	Removing language from current code regarding extremely low thresholds for pothole and stream basins
<i>PCM Vol. 1, Chapter 2.4.2</i>	Consistent with EMC Title 14.80.040 B.5, work within Landslide Hazard Management Areas is restricted and not allowed during the wet season (November 1st through May 1st) without erosion provisions addressed in the geotechnical report and approved by the City.	Clarifying work limitations in Landslide Hazard Areas during the wet season, updating references as needed for consistency

Edgewood Municipal Code Section	Description of Proposed Amendment	Purpose
PCM Vol. 1, Chapter 2.4.5	Any project proposing 2,000 square feet or more of new and/or replaced impervious surface area with any discharge (including overflow) must perform a downstream analysis, from the site to receiving water body (pothole, lake, or stream), <i>but in no case any more than one-half mile from the site</i> . The engineer must field-inspect the drainage systems and verify adequate capacity for existing, proposed, and over-flows. Sites in potholes require a zero-rise analysis. Adequacy is based on conveyance capacity during the 50-year peak flow, flooding problems, erosion damage or potential, freeboard, and storage within the system. In lieu of downstream analysis, the project may either: 1) demonstrate the 100-year unmitigated developed runoff will not be greater than existing conditons, or 2) retain 100% of stormwater runoff, increase the modeled retention volume(s) by 20%, and no surface water can leave the site.	Clarifying the importance of downstream analysis and review, defining adequate conveyance capacity and additional analysis required for pothole basin areas, and providing an option in lieu of downstream analysis for sites that adequately infiltrate runoff onsite
	Add the following to the second paragraph after “flow control exempt per Section 2.4.7 of this chapter”: “(including those project sites that infiltrate 100% of stormwater onsite)”	Clarifying that projects that provide 100% infiltration will be considered "flow control exempt", in regard to Minimum Requirement #5
	Infiltration projects may be subject to groundwater flow testing and pattern identification where it may cause new or exacerbate existing flooding , erosion or landslide problems.	Adding flooding to current code language regarding the list of triggers for potential infiltration design groundwater analyses
	Removing Table 2.1 and non-UGA requirements	Clarifying requirements and eliminating options that are not applicable to the City of Edgewood
	Replace Figure 2.3	Simplifying flowchart by removing options not applicable to Edgewood.
PCM Vol. 1, Chapter 2.4.6	Delete current code amendments regarding thresholds	Removing unnecessary language from current code, already matches PCM
PCM Vol. 1, Chapter 2.4.7	Delete current code amendments regarding acceptable analysis software	Removing unnecessary language from current code, already discussed in PCM
	There are no flow control-exempt receiving waters in the City of Edgewood. Delete associated discussion.	Clarifying that there are no water features within the City of Edgewood that meet the PCM definition of flow control exempt water body
	On page 2-19 under “Thresholds”, the standard flow control requirement for western Washington must be achieved if any of the following conditions are met / exceeded.	Revising language to improve clarity
	On page 2-19, reduce the effective impervious area limit under "Thresholds" to 5,000 square feet or more in a threshold discharge area.	Reducing the threshold for flow control facilities from the standard of 10,000 square feet more closely matches the "0.1 cfs increase" threshold
	On page 2-20, remove refereces to flow-control exempt water bodies and make sure all project sites consider forested conditions for the predeveloped scenario.	Edgewood contains no flow control-exempt water bodies, and clarifying that all projects shall consider forested conditions for the predeveloped scenario
	On page 2-21, under “Category B”, replace both instances of the phrase “(existing)” after “predeveloped” with “(forested)”. Also, add language clarifying that a zero-rise analysis must be performed on the closed depression, and WWHM, MGSFlood, or other DOE-approved continuous runoff model shall be used for the zero-rise analysis.	Clarifying that all project sites shall consider forested conditions for the predeveloped scenario (including those in potholes), confirming that a zero-rise analysis must be preformed for projects within closed depressions, and clarifying that HEC-RAS is not appropriate for pothole zero-rise analyses.
PCM Vol. 1, Chapter 3.2.6	On page 3-7, bullet point 11, replace “PCC title 18J” with “EMC Title 18”.	Updating references as needed for consistency
	On page 3-8, under “Advanced Plan Requirements”, replace “PCC Title 17A, Soil Engineering – Stability” in the last paragraph with “EMC Title 14”.	
PCM Vol. 1, Chapter 3.2.9	Replace the first sentence of the second paragraph with the following: The recorded maintenance covenant must be created on a city-approved form, obtainable from the Surface Water Program Manager.	Clarifying process of recording a maintenance covenant per current policy
PCM, Vol. 1, Appendix I-B	Insert: "See Chapter 14.30 EMC for wetland protection, buffer and mitigation requirements. The requirements of EMC 14.30 shall take precedence over Appendix I-B."	Including additional reference to increase clarity and consistency
Volume 1 Glossary	Areas of Special Flood Hazard: Replace “PCC 18E” with “EMC 14.70”.	Updating references as needed for consistency
	Large Lot: Deleted / Not Applicable	Removing county-specific definition
	One-Lot Subdivision: Deleted / Not Applicable	Removing county-specific definition
	Short Plat or Short Subdivision: Replace with “As defined in EMC Title 16.”	Updating references as needed for consistency
	Subdivision: Replace with “As defined in EMC Title 16.”	Updating references as needed for consistency
PCM Vol. 2, Chapter 2.2.1 Narrative	On page 2-4, delete the second paragraph under “Certified Erosion Control Lead”.	Removes the requirement for the County Engineer's Inspection Report Form as part of the Construction SWPPP.
	On page 2-5, under “Financial/Ownership Responsibilities”, replace “PCC Title 17A.20” with “EMC 16.06.050”.	Updating references as needed for consistency

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PCM Vol. 2, Chapter 2.3.3	On page 2-12, under "Element #2: Establish Construction Access", bullet six, replace with "applicable purveyor – see the City of Edgewood for more information."	Updating references as needed for consistency
	On page 2-20, under the third bullet, replace with "applicable purveyor – see the City of Edgewood for more information."	
	On page 2-22, under the first bullet, replace with "applicable purveyor – see the City of Edgewood for more information."	
PCM Vol. 2, Chapter 3.1	Under "Design and Installation Specifications", second bullet, replace with "applicable purveyor – see the City of Edgewood for more information."	Updating references as needed for consistency
PCM Vol. 2, Chapter 3.2	Under "Sanitary Sewer Disposal", replace with "applicable purveyor – see the City of Edgewood for more information."	Updating references as needed for consistency
PCM Vol. 3, Chapter 2	Fourth paragraph, replace the last sentence with: Additional information on general LID site design and requirements of the city's Development and Design Standards (per EMC 18.90 and 18.95) are provided in Volume VI.	Updating references as needed for consistency
PCM Vol. 3, Chapter 2.5.2	Under "Construct the Facility and Conduct Performance Testing:", replace with: To demonstrate that the facility performs as designed, the constructed facility must be tested and monitored per the Verification of Performance requirements in Section 2.5.3, and documented as part of the facility's as-built records.	Clarification of the testing and monitoring of facility performance and documentation on as-built drawings
PCM Vol. 3, Chapter 2.5.3	On page 2-18, under "100-year Overflow Conveyance", add the following: To verify the capacity of the overflow conveyance, a downstream analysis shall be prepared per Volume I, Chapter 2.4.5 of this manual (as modified herein). In lieu of this downstream analysis, the engineer may demonstrate 100% retention of stormwater runoff within the project site (following the methods prescribed in the PCM), apply a 20% safety factor to the modeled stormwater retention volume(s), and no surface water will be allowed to leave the site (including bypass and overflow).	Require a downstream analysis to verify capacity of overflow conveyance, or that an engineer demonstrate 100% of stormwater is retained onsite with a 20% safety factor
PCM Vol. 3, Chapter 3.2.1	On page 3-8, replace the first bullet point with the following: Runoff from dispersion facilities shall not be allowed for stormwater discharges up-slope from Landslide or Erosion Hazard Areas. If the natural discharge location of the site is toward a Landslide or Erosion Hazard Area, stormwater shall be conveyed down the slope in a pipe as required by Chapters 14.80 and 14.110 EMC. If the natural discharge location of the site is away from the Landslide or Erosion Hazard Area, a piped storm system shall be used to convey stormwater away from the hazard area. Stormwater management facilities for the site shall be implemented in accordance with the requirements of Chapter 13.05 EMC and PCM as supplemented herein.	Amending the PCM to include language already contained in EMC, accounting for the unique geology found in Edgewood in order to reduce the potential downslope effects of stormwater runoff in Landslide or Erosion Hazard Areas
	On page 3-8, add the following to the end of Section 3.2.1: To preserve the vegetative flowpath area from alteration, the dispersion system and flowpath length shall be documented on a site plan, to be recorded on the property title. The site plan shall include the following requirements: 1. Maintenance of vegetation in the flowpath area shall be in accordance with BMP T5.13 (or otherwise approved design). 2. Splashblocks or gravel-filled trenches shall not be covered or removed but shall be maintained in accordance with the approved design. 3. If the flowpath area, splashblocks, or gravel-filled trenches are disturbed, additional stormwater management facilities shall be designed and constructed in accordance with the PCM or City's most current adopted stormwater manual.	Amending the PCM to include language already contained in EMC, in order to preserve the vegetative flowpath from future alteration
PCM Vol. 3, Chapter 3.10.2	On page 3-87, replace "PCC Title 17C – Construction and Infrastructure Regulations – Building and Fire Codes" with "EMC Title 15.05".	Updating references as needed for consistency

Edgewood Municipal Code Section	Description of Proposed Amendment	Purpose
PCM Vol. 3, Chapter 3.12.1	On page 3-106, replace "Stormwater Sign Sample Specifications" with the provided example.	Establishing standard signage requirements for the City of Edgewood.
PCM Vol. 4, Chapter 1.3	On page 1-2, first paragraph, replace "Pierce County Code (PCC) Title 11" with "EMC 13.25".	Updating references as needed for consistency
13.25.030	Item U - Definition of "Manual" - replace "stormwater management manual" with "PCM"	Updating references as needed for consistency
13.25.040	Item E.9 - Allowable Discharges - replace "water" with "Uncontaminated water"	Clarification per NPDES Phase II Municipal Stormwater Permit
	Item F.3 - Conditional Discharges - after "swimming pool" insert "and/or hot tub", and after the second sentence, insert "Discharges shall be thermally controlled to prevent an increase in temperature of the receiving water." and in the fourth sentence, after "Swimming pool" insert "and hot tub"	Addressing the need to consider hot tub water the same as swimming pool water and assure that temperature is considered when discharging, and for consistency between code sections.
13.25.050	Item A - General - In the first sentence, after the word "manual" insert "the PCM as adopted with revisions."	Updating references as needed for consistency
	Item A - General - In the second sentence, after the word "development" insert "and redevelopment"	Clarification to include redevelopment
13.25.080	Remove reference to \$10,000 cap on civil penalties and to each additional day a violation continues as constituting a separate violation.	Part of overall revisions to the Penalties section to incorporate escalating enforcement, as required by NPDES Phase II Municipal Stormwater Permit
	Add escalating enforcement for civil penalties. Establish penalties and penalty caps for first time violators and for any subsequent / repeat violations.	
	Establishing a timeline and process for when a penalty starts accruing.	
	Establishes that punishments for misdemeanor violations shall be as described and provided for in EMC Chapter 13.25.	
14.10.100	Replace "City Manager" with "Mayor"	Updating reference for consistency with current policy
14.40.040	Update reference to the city's adopted stormwater manual	Updating references as needed for consistency
14.50.040	Add requirement that a project in aquifer recharge and wellhead protection areas comply with EMC 13.05 and demonstrate that the total post-development infiltration rate be equal or better than the pre-development rate.	Ensuring projects will not negatively impact these areas or downstream properties.
	Place prohibited well classes (I, III, and IV) before "underground injection wells"	Clarifies that other classes of underground injection wells may be allowed
	Clarify stormwater quality treatment and flow control in conformance with the city's adopted stormwater manual shall be provided for all nonhazardous uses.	Adds clarity and consistent with current policies
15.05.050, 15.05.060	Updating reference to Title 13	Updating references as needed for consistency
	Updating requirements for disposing swimming pool, spa, or hot tub water.	For consistency with the PCM and current policies
15.05.080	Replacing reference to SWMM with the PCM	Updating references as needed for consistency
16.05.040	Replace reference to the city's surface water design manual with EMC 13.05	Updating references as needed for consistency
18.10.020	Expand the intent of Title 18, Development Standards, to include implementation of LID to the maximum extent feasible.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements
18.20.110, 18.20.150, 18.20.190, 18.20.220	Add definition for "Hard surface", and revise/expand definitions of "Low Impact Development (LID)", "Patio", and "Stormwater conveyance facilities".	For consistency with the PCM and current policies
18.40.030	Emergency projects are exempt from permit prior to work, but must either restore site or comply with permit requirements within 60 days of emergency resolution.	Clarification per the 2015 PCM and other existing code sections
18.50.030, 18.50.040, 18.50.060	Expanding the possible permit condition requiring stormwater management to include implementation of LID.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements

Edgewood Municipal Code Section	Description of Proposed Amendment	Purpose
18.50.035	Reorganize sentence to reflect preference of retaining <u>healthy</u> native vegetation over landscaping.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements and add clarity that preference is for retention of healthy native vegetation
	Expanding landscaping requirements to include LID to the maximum extent feasible, as defined in PCM	For consistency with current NPDES Phase II Municipal Stormwater permit requirements
18.70.070	Updating definition of stormwater facilities to include LID and defining Level 1, Level 2, and Level 3 facilities.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements and current policies
18.80.040, 18.80.050, 18.80.100, 18.80.110	Updating lot development standards to include standards effective impervious surface and hard surface. Also updating code citation.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements and current policies
18.80.080	Updating Development Standards table (Table 2) to include standards for effective impervious surface and hard surface, and removal of note 12 as it is now repetitive.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements and current policies
	Updating Development Intensity Bonus Options table (Table 3) to require LID to the maximum extent feasible in applicable features.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements
	Expanding landscaping requirements to include LID to the maximum extent feasible.	
18.90.020	Requiring the use of LID materials to the maximum extent feasible.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements
18.90.090	Adding discussion of benefits of Low Impact Development; expanding landscaping requirements to include LID to the maximum extent feasible; and adding references to the PCM and other reference documents.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements and current policies
	Adding requirements that street trees be incorporated into LID system to the maximum extent feasible and that trees within 5 feet of an LID system underdrain be provided with a root control barrier.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements and LID guidance manuals
	Adding requirement that irrigation systems be permanent unless the plant material is determined to be drought tolerant.	
	Requiring landscaped areas be deep-tilled for water conservation, and clarifying that nonporous materials can be used as liners in LID systems, when appropriate.	
18.90.130	Requiring implementation, protection, and identification of LID (standards, materials, and systems) in parking areas.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements and current policies
18.95.030	Requiring implementation of LID to the maximum extent feasible on a site - in landscaping, parking areas, walkways, open spaces, drive lanes, etc.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements
18.95.040	Requiring implementation of LID to the maximum extent feasible in public outdoor spaces.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements
18.95.050	Requiring implementation of LID to the maximum extent feasible in open spaces.	For consistency with current NPDES Phase II Municipal Stormwater permit requirements
20.05.160	Removing superfluous references and updating list of pertinent policies and references	Updating references as needed for consistency