# 2020 KITSAP COUNTY STORMWATER DESIGN MANUAL AND TITLE 12 UPDATE

Corrections Memo

**BACKGROUND**

Following the July 9, 2020 Kitsap County Planning Commission Public Hearing, a few errors were identified. Specifically, two sections of the Kitsap County Stormwater Design Manual 2nd Draft dated June 2020. The corrections are as follows:

1) **Project Applicability:** Volume I, Chapter 4, Section 4.1 figures summarizing the minimum requirements for new development and redevelopment projects.
2) **BMP Design Permeable Pavement:** Volume II, Chapter 5, Section 5.4.8.1 addresses requirements for stormwater Best Management Practice (BMP) designs for permeable pavement.

This corrections or errata memo has been prepared to address as a result and further outlined below including design manual purpose, issue and Department recommendation.

## 1) PROJECT APPLICABILITY: NEW DEVELOPMENT AND REDEVELOPMENT MINIMUM REQUIREMENTS

Located in Volume I, Chapter four (4), Section 4.1 Applicability of the Kitsap County Stormwater Design Manual 2nd Draft identifies nine minimum requirements for stormwater management that pertain to new development and redevelopment sites. These nine minimum requirements include:

- Preparation of Stormwater Site Plans;
- Construction Stormwater Pollution Prevention;
- Source Control of Pollution;
- Preservation of Natural Drainage Systems and Outfalls;
- Onsite Stormwater Management;
- Runoff Treatment;
- Flow Control;
- Wetland Protection; and
- Operation and Maintenance.

Not all nine minimum requirements apply to every project. The applicability varies depending on the project scope and size. Two figures, referenced in Section 4.1 Figures 4.*1 (Flow Chart for New Development Minimum Requirements)* and 4.2 (*Flow Chart for Redevelopment Minimum Requirements)* were developed to outline process steps to determine which minimum requirements would be applicable.

**ISSUE**

Figures 4.1 and 4.2 in Volume I of 2nd Draft are inconsistent with current and proposed changes to Kitsap County Code Title 12. In the proposed changes, dated June 2020, Kitsap County Chapter 12.20.010 sets thresholds that determine the applicability. These thresholds are excerpted from the draft proposal below.

**12.20.010 Minimum requirements for new and redevelopment projects.**
Not all minimum requirements apply to every development or redevelopment project. The applicability varies depending on the project type and size. This section identifies thresholds that determine the applicability of the minimum requirements for new and redevelopment projects and is consistent with the Ecology Manual. Use the flow charts in Figures I-4.12~~.4.1~~ and I-4.22~~.4.2~~ to determine which of the minimum requirements apply. The minimum requirements are presented in Section 4.2, Volume I of the Kitsap manual.

(1) New Development. All new development shall be required to comply with minimum requirement No. 2.

(A) The following new development shall comply with minimum requirements Nos. 1 through 5 for the new and replaced hard surfaces and for the land disturbed when the development:

1. Results in two thousand square feet, or greater, of new plus replaced hard surface area; or
2. Has land disturbing activity of seven thousand square feet or greater.

(B) The following new development shall comply with minimum requirements Nos. 1 through 9 for the new and replaced hard surfaces and the converted vegetation areas when the development:

1. Includes grading involving the movement of five thousand cubic yards or more of material; or
2. For sites located inside census defined urban areas:
    a. Results in five thousand square feet, or greater, of new plus replaced hard surface area, or
    b. Converts three-quarters acre, or more, of vegetation to lawn or landscaped areas, or
    c. Converts two and one-half acres, or more, of native vegetation to pasture.

3. For sites located outside census defined urban areas or UGAs, results in ten thousand square feet or more of new plus replaced hard surface area, or results in five percent or more of hard surface area covering the lot area (whichever is greater).

(2) Redevelopment. All redevelopment shall be required to comply with minimum requirement No. 2.

(A) The following redevelopment shall comply with minimum requirements Nos. 1 through 5 for the new and replaced hard surfaces and the land disturbed when the development:

1. Results in two thousand square feet, or more, of new plus replaced hard surfaces, or
2. Has land disturbing activity of seven thousand square feet or greater.

(B) The following redevelopment shall comply with minimum requirements Nos. 1 through 9 for the new and replaced hard surfaces and converted vegetations areas when the development:

1. Includes grading involving the movement of five thousand cubic yards or more of material; or
2. For sites located inside census defined urban areas;
    a. Adds five thousand square feet or more of new hard surfaces, or
    b. Converts three-quarter acres, or more, of vegetation to lawn or landscaped areas; or
    c. Converts two and one-half acres, or more, of native vegetation to pasture, or
    d. Is a road-related project that adds five thousand square feet or more of new plus replaced hard surfaces, and
        ii. For commercial or industrial projects: the valuation of proposed improvements, including interior improvements, exceeds 50% of the assessed value of the existing project site improvements.
        iii. For all other projects: valuation of the proposed improvements, including interior improvements, exceeds 50% of the assessed value of the existing site improvements.

3. For sites located outside census defined urban areas or UGAs, adds ten thousand square feet or more of new hard surface area, or results in five percent or more of hard surface area covering the lot area (whichever is greater).

The 2nd Draft Figures in the Stormwater Design Manual presented lawn and forest conversion parameters for areas outside of Growth Management Act (GMA) established Urban Growth Areas (UGAs) as well as Census Defined Urbanized Areas which go beyond existing UGA boundaries. This is inconsistent with Title 12 proposed changes.

**DEPARTMENT'S OF PUBLIC WORKS AND COMMUNITY DEVELOPMENT RECOMMENDATION**
Motion to amend the Volume I, Section 4.1 of the 2nd Draft Stormwater Design Manual dated June 2020 to replace with the attached revised Figures 4.*1 (Flow Chart for New Development Minimum Requirements)* and 4.2 (*Flow Chart for Redevelopment Minimum Requirements).*

**ASSOCIATED ATTACHMENTS**
Revised Figure 4.1
Revised Figure 4.2

## 2) BMP DESIGN PERMEABLE PAVEMENT

Volume II, Chapter 5, Section 5.4 of the 2nd Draft manual outlines stormwater best management practices or BMPs. This chapter outlines methods, requirements, criteria, design, flow control BMPs, etc.

**ISSUE**
Specifically, Volume II Section 5.4.8.1 provides a description of permeable pavement BMPs.
The introductory paragraph includes new proposed language but also proposed deletions as shown below.

Permeable pavement (BMP T5.15 in Volume V, Chapter 5 of the Ecology Manual) is a paving system that allows rainfall to infiltrate into an underlying aggregate storage reservoir, where stormwater is stored and infiltrated to the underlying subgrade or removed by an overflow drainage system.

A permeable pavement ~~facility~~ BMP consists of a pervious wearing course (e.g., porous asphalt, pervious concrete, etc.) and an underlying storage reservoir. The storage reservoir is designed to support expected loads and store stormwater to allow time for the water to infiltrate into the underlying soil.

~~While not explicitly addressed in this section, infiltration may be allowed under impermeable pavements in lieu of permeable pavement.~~

Pavement for vehicular and pedestrian travel occupies roughly twice the space of buildings. Stormwater from vehicular pavement can contain significant levels of solids, heavy metals, and hydrocarbon pollutants. Both pedestrian and vehicular pavements also contribute to increased peak flow durations and associated physical habitat degradation of streams and wetlands. Optimum management of stormwater quality and quantity from paved surfaces is, therefore, critical for improving fresh and marine water conditions in Puget Sound.

The third paragraph sentence, ~~*"While not explicitly addressed in this section, infiltration may be allowed under impermeable pavements in lieu of permeable pavement".*~~ was accidentally deleted versus revised to reflect comments received from the Department of Public Works-Roads Division and the public. Explicitly, public comments received would like to encourage this type of BMP. While there is a desire from the private sector to allow impermeable pavement BMPs for projects, it is the long-standing policy position of Public Works and the designated County Road Engineer to not accept infiltration under impermeable pavement within public rights-of-way. This is due to long-term maintenance and associated costs on the public roadway system when using such techniques.

**DEPARTMENT'S OF PUBLIC WORKS AND COMMUNITY DEVELOPMENT RECOMMENDATION**
To balance public comments along with long-term maintenance obligations within public rights-of-way, motion to amend Volume II of the 2nd Draft Stormwater Design Manual dated June 2020, Section 5.4.8.1 to reinsert third paragraph and revise as follows:

*" While not explicitly addressed in this section, infiltration may be allowed under impermeable pavements, outside of public rights of way, in lieu of permeable pavement."*