# Exhibit A

Directors' Report and Recommendation
July 17, 2015

## Introduction

The purpose of the City of Seattle's Stormwater Code (Chapters 22.800 – 22.808 SMC) is to protect life, property, public health, and the environment from the adverse impacts of urban stormwater runoff. Adverse impacts can include flooding, water quality pollution, landslides, and erosion. The Stormwater Code was substantially updated in 2009, and there were three minor revisions in 2015. Whereas the 2009 Stormwater Code update included several major modifications with significant cost impacts to the City and developers, this 2016 Stormwater Code Update consists of relatively less significant modifications with less cost impacts.

The Stormwater Code and associated joint Seattle Public Utilities/Department of Planning and Development (SPU/DPD) Directors' Rules are being revised in order to comply with the requirements of the City's coverage under the 2013-2018 Phase I Municipal Stormwater Permit (Ecology 2012) (as modified effective 2015, this is the MS4 Permit). The Permit was issued by the Washington State Department of Ecology (Ecology) under both the National Pollutant Discharge Elimination System (NPDES) program established by the federal Clean Water Act and the State of Washington Water Pollution Control Law. The Permit was issued on August 1, 2012, became effective on August 2, 2013, and was modified effective January 16, 2015. The MS4 Permit requires that the City's Stormwater Code and associated Stormwater Manual (to be contained in the Directors' Rule) include minimum requirements, thresholds, definitions, and other specified requirements, limitations and criteria, determined by Ecology to be equivalent to Appendix 1 of the MS4 Permit for new development, redevelopment and construction. In addition, maintenance provisions must be at least as protective of facility function as, and source control provisions must be functionally equivalent to, Ecology's Stormwater Management Manual for Western Washington (SWMMWW, Ecology 2014a).

SPU – in close collaboration with DPD, other City departments, and external stakeholders – is in the process of updating the Stormwater Code to 1) incorporate new Ecology requirements, 2) incorporate policy changes, and 3) improve usability. All updates to the Stormwater Code were originally intended to occur at one time with an effective date of June 30, 2015. However, Ecology was delayed in reviewing the City's draft Stormwater Code, which prevented Seattle from being able to make all modifications on the original timeline and extended the City's deadline to adopt all modifications by several months. Nevertheless, Seattle wished to make three cost-saving Stormwater Code modifications effective by the originally anticipated effective date. Therefore, updates to the Stormwater Code are proceeding as two legislative processes: the now-complete "2015 Revision to Stormwater Code" (effective date 5/24/15) and the "2016 Stormwater Code Update" (addressed by this Directors' Report, anticipated effective date 1/1/16).

This Directors' Report, for the "2016 Stormwater Code Update," is submitted jointly by the Directors of SPU and DPD. It answers frequently asked questions about Seattle's Stormwater Code, provides regulatory context, summarizes significant proposed modifications and rationale, and provides recommendations regarding the proposed legislation.

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## Frequently Asked Questions

**Why do we have a Stormwater Code?** Rain water running off of urban land surfaces can cause flooding, landslides, erosion, and other hazards. It can also carry pollutants into creeks, lakes, bays and other receiving waters. Stormwater regulations are needed to protect people, property, and the environment from damage that can be caused by stormwater runoff. Seattle's stormwater regulations are also written to satisfy the City's obligation to comply with the 2013-2018 Phase I Municipal Stormwater Permit, as modified (the MS4 Permit), under which coverage is issued to the City by Ecology.

**What is in Seattle's Stormwater Code?** Seattle's Stormwater Code includes:

- A description of the purpose, scope, applicability, exemptions, adjustments, exceptions, authorities, and compliance requirements
- Definitions of key terms
- Prohibitions of certain discharges and conditions for permissible discharges
- Minimum requirements for all discharges and all real property, designed to reduce the introduction of pollutants into stormwater runoff as close to the source as possible
- Minimum requirements for all projects regarding stormwater pollution prevention during construction and grading activities
- Minimum requirements for all projects regarding on-site stormwater management, flow control, and water quality treatment facilities
- Drainage control review and application requirements
- Procedures for enforcing the Stormwater Code.

**Why are we updating the Stormwater Code?** The Stormwater Code is being updated to comply with the City's obligations under the MS4 Permit, to incorporate policy changes, and to improve usability.

**Who is responsible for updating the Stormwater Code?** It is an SPU-led project being conducted in close collaboration with DPD, the Seattle Department of Transportation (SDOT), other City departments, and internal and external stakeholders.

**Why is updating the Stormwater Code being done as a two part legislative process?** All updates to Seattle's Stormwater Code were originally intended to occur at one time with an effective date of June 30, 2015. However, Ecology was delayed in reviewing the City's draft Stormwater Code which prevented Seattle from being able to make all modifications on the original timeline and extended the City's regulatory deadline to adopt all modifications by several months. Nevertheless, Seattle wished to make three cost-saving Stormwater Code modifications effective by the originally anticipated effective date. Therefore, updates to the Stormwater Code are proceeding as two legislative processes: the now-complete "2015 Revision to Stormwater Code" (effective date 5/25/15) and the "2016 Stormwater Code Update" addressed by this proposed legislation (anticipated effective date 1/1/16). The legislative documentation for the 2015 revisions to the Stormwater Code, Ordinance 124758, provides additional explanation of the two-part process.

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**What are the major changes in the revised Stormwater Code?** The "Significant Modifications" section of this Exhibit provides details on the primary proposed modifications to the Stormwater Code. Of the proposed modifications outlined in that section, the four most significant involve: 1) proposed revisions regarding the effective date of the Stormwater Code relative to project application dates and construction dates (#2 in Significant Modifications section); 2) additions, revisions, and deleting of various terminology (#3); 3) proposed changes with regard to permissible discharges, and new and revised conditions that apply to permissible discharges (#5); and 4) proposed changes to the minimum requirements that apply to all development projects to meet the City's MS4 Permit obligations and account for Seattle's unique development patterns (#10 - #21).

**What has been the extent of public participation?** Beginning in January 2013, a series of meetings has been conducted to inform interested stakeholders about proposed updates to the Stormwater Code. These meetings covered modifications proposed both as part of the "2015 Revision to Stormwater Code" and the "2016 Stormwater Code Update." These meetings included representatives from the business community, development interests, environmental advocacy groups, engineering and consulting firms, community groups, and other local and state regulators. The meeting dates and the name of each target group are shown below.

**Public Presentations on Stormwater Code Update Process**

| Date | Group |
|---|---|
| January 24, 2013 | Thornton Creek Alliance |
| March 18, 2013 | External User Stakeholders |
| May 8, 2013 | Master Builders Association of King and Snohomish Counties |
| May 9, 2013 | Fauntleroy Watershed Council |
| June 27, 2013 | Seattle Builders Council Master Builders Association |
| **November 7, 2013** | **Public Open House** |
| November 19, 2013 | Thornton Creek Alliance |
| November 26, 2013 | North Seattle Industrial Association |
| December 17, 2013 | King County |
| **June 3, 2014** | **Public Meeting** |
| June 5, 2014 | Seattle Builders Council Master Builders Association |
| June 11, 2014 | American Council of Engineering Companies (ACEC) |
| July 15, 2014 | Washington Society of Landscape Architects (WASLA) |
| July 16, 2014 | Master Builders Association (MBA) |
| July 17, 2014 | American Society of Civil Engineers (ASCE) |
| July 18, 2014 | American Public Works Association (APWA) |
| August 13, 2014 | Urban Forestry Commission |
| January 26, 2015 | Puget Soundkeeper Alliance (PSA) |
| February 24, 2015 | North Seattle Industrial Association |
| March 19, 2015 | SPU Developer Services Advisory Committee |
| June 3, 2015 | Urban Forestry Commission |
| **June 10, 2015** | **Public Meeting** |

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## Regulatory Context

**NPDES Municipal Stormwater Permit (MS4 Permit).** Seattle's Stormwater Code and associated Stormwater Manual (to be contained in the Directors' Rule) are now being revised in order to comply with the MS4 Permit, as well as to incorporate policy changes and improve usability. After the updated Stormwater Code and Stormwater Manual are adopted, it is anticipated that Ecology will modify the current MS4 Permit to include Ecology's determination that Seattle's updated Stormwater Code and Stormwater Manual meet relevant MS4 Permit requirements and achieves equivalency. The MS4 Permit authorizes the City to discharge municipal stormwater to waters of the State of Washington from municipal separate storm sewers that it owns or operates. Discharges covered under the MS4 Permit, as required by paragraph 402(p)(3) of the Clean Water Act, must effectively prohibit non-stormwater discharges into storm sewers that discharge to surface waters. Per the Clean Water Act, permittees must apply controls to reduce the discharge of pollutants to the maximum extent practicable. Ecology also took action through the issuance of the MS4 Permit, as authorized by Revised Code of Washington (RCW) Chapter 90.48, particularly RCW 90.48.162, to control impacts of stormwater discharges to waters of Washington State, including ground waters, unless the discharges are authorized by another regulatory program. (Ecology 2014b)

The MS4 Permit requires that the City's Stormwater Code and associated Stormwater Manual include minimum requirements, thresholds, definitions, and other specified requirements, limitations and criteria, determined by Ecology to be equivalent to Appendix 1 of the MS4 Permit for new development, redevelopment and construction. Ecology has reviewed the City's proposed revisions to the Stormwater Code that require Ecology approval, and Ecology has found that the revisions meet the regulatory requirements of the MS4 Permit. Any changes to the Stormwater Code made through the City's legislative process that could affect this equivalency determination will be reviewed by Ecology.

Seattle's Stormwater Manual is on a slightly later schedule than the Stormwater Code. Ecology reviewed the draft Manual (Exhibit C to the Bill Summary and Fiscal Note for this legislation) and provided few comments (Exhibit D to the Bill Summary and Fiscal Note for this legislation). The City is in the final stages of making the very limited changes necessary to secure Ecology's final approval, which is expected in summer or fall 2015. The approved Stormwater Manual provisions will be adopted in 2015 by a joint SPU/DPD Directors' Rule.

The Code and Manual also include maintenance provisions at least as protective of facility function as Ecology's SWMMWW (no revisions were needed) and source control provisions that are functionally equivalent to Ecology's SWMMWW. Ecology does not review or approve these provisions.

**Seattle Stormwater Code and Stormwater Manual.** The City of Seattle's Stormwater Code (Chapters 22.800-22.808 SMC) contains requirements designed to protect life, property, public health, and the environment from the adverse impacts of urban stormwater runoff. Adverse impacts can include flooding, pollution, landslides, erosion, and other potential hazards. The Stormwater Code applies to:

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- All grading and drainage and erosion control, whether or not a permit is required
- All land disturbing activities, whether or not a permit is required
- All discharges directly or indirectly to a public drainage system or (proposed) a public combined sewer
- All discharges directly or indirectly into receiving waters within or contiguous to Seattle city limits
- All new and existing land uses
- All real property.

To support the implementation of the Stormwater Code, the Director of SPU and the Director of DPD issue joint Directors' Rules (Seattle's Stormwater Manual), which clarify or interpret the Stormwater Code by specifying methods, details, and general guidelines as authorized by the Code. The existing Directors' Rules are being revised and will be incorporated into one Directors' Rule, the Seattle Stormwater Manual, that directly relate to the Stormwater Code. The 2016 Seattle Stormwater Manual will consist of the following sections:

- Volume 1 – Project Minimum Requirements (pursuant to the Stormwater Code Minimum Requirements)
- Volume 2 – Construction Stormwater Control
- Volume 3 – Project Stormwater Control
- Volume 4 – Source Control
- Volume 5 – Enforcement
- Appendices.

**Best Available Science** – When the City updated its Environmentally Critical Areas (ECA) ordinance, it presented a detailed review of the best available science regarding wetlands, fish and wildlife conservation areas, geologic hazard areas, flood-prone areas, abandoned landfills, and critical aquifer recharge areas in its report Environmental Critical Areas: Best Available Science Review (Seattle 2005). As part of the 2009 Stormwater Code Update, the City prepared a document describing the best available science specific to urban stormwater runoff management (Seattle 2009). That document has been updated for this proposed legislation and is included as part of the Bill Summary and Fiscal Note for this legislation, as Exhibit B.

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## Significant Modifications

The proposed modifications to the Stormwater Code will affect administration, source control, development, construction site stormwater pollution prevention control, and enforcement requirements. The major modifications being proposed to the Stormwater Code are summarized below by Chapter.

### Chapter 22.800 - Title, Scope, and Authority

1. Revised exemptions associated with pavement practices (22.800.040.A.2.b): The proposed modification includes revised terminology associated with exemptions for pavement maintenance practices to match Ecology's revised language in the MS4 Permit. The current Stormwater Code exempts "road maintenance practices" from various Stormwater Code minimum requirements. The proposed 2016 Seattle Stormwater Code update changes "Road maintenance practices" to "Pavement maintenance practices," consistent with the MS4 Permit. This will result in a broader range of projects qualifying for the exemption and will be consistent with the updated MS4 Permit.
2. Added new section for transition to Revised Stormwater Code (22.800.100): In association with its target effective date of January 1, 2016, the 2016 Stormwater Code Update includes new language regarding the applicability of Stormwater Code revisions in relation to specified project permit application and construction dates. The 2016 Stormwater Code Update will apply to permit applications submitted on or after January 1, 2016. In addition, for projects considered under the current Stormwater Code before amendment, if construction has not started by June 30, 2020, the permit expires and the 2016 Stormwater Code will apply. This revision was to achieve equivalency with MS4 Permit requirements (which apply to areas that discharge to the City's municipal stormwater system) and affects both building and master use permits (including subdivisions). A separate, but parallel, Stormwater Code applicability ordinance with associated legislative documentation is being prepared to incorporate these changes into applicable sections of the Building, Residential, Land Use, and Grading Codes.

### Chapter 22.801 – Definitions

3. Added, revised, and deleted terms: In the proposed 2016 Stormwater Code Update, new terms have been added to this Chapter, the definitions for other terms have been materially modified, and the definitions for terms have been deleted. Table 1 lists key terms that are proposed to be added (indicated as underlined text), materially modified (indicated by *italicized* text), or deleted (indicated by ~~strikethrough~~ text). These proposed definition changes are necessary to clarify certain Stormwater Code provisions, to implement revised minimum requirements, and to meet the provisions of the MS4 Permit. All proposed definition changes are shown in the draft Stormwater Code (Attachment C).

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**Table 1: Key New, Materially Modified, or Deleted Definitions**

| | | |
|---|---|---|
| ~~Agency with jurisdiction~~ | *Impervious surface* | Project Site |
| Aquatic life use | Industrial activities | *Receiving water* |
| Arterial | ~~Joint project~~ | Replaced hard surface |
| ~~Basin plan~~ | *Land disturbing activity* | *Replace impervious surface* |
| *Capacity-constrained system* | *Large project* | *Roadway project* |
| ~~Cause or contribute to a violation~~ | *Nutrient-critical receiving water* | *Sidewalk project* |
| Combined sewer basin | On-site BMP | *Single-family residential project* |
| Drainage basin plan | *Parcel-based project* | *Site* |
| *Drainage system* | Pollution-generating hard surface | Small lakes |
| Erodible or leachable materials | *Pollution-generating impervious surface* | *Stormwater* |
| ~~Flow-critical receiving water~~ | *Pollution-generating pervious surface* | *Trail project* |
| *Geotechnical engineer* | Private drainage system | *Watercourse* |
| *Green stormwater infrastructure* | | |
| Groundwater | | |
| Hard surface | | |
| Illicit Connection | | |

New: underlined Materially Modified: *Italicized* Deleted: ~~Strikethrough~~

## Chapter 22.802 – Prohibited and Permissible Discharges

4. Added new subsection to Discharges to Public Combined Sewers (22.802.020.D): A proposed new subsection stating that prohibited discharges to the combined sewer are stated in Chapter 21.16 SMC (Side Sewer Code). This is added to provide a useful cross-reference.

5. Revised Permissible Discharges (22.802.030): The proposed list of permissible discharges includes proposed modifications and conditions, nearly all of which are included for equivalency with the MS4 Permit. Table 2 summarizes the sections where text is proposed for modification. (Underlined text indicates proposed additions relative to the current Stormwater Code). Table 2 does not include all proposed changes, but summarizes the main topic areas and key language. All proposed changes are shown in the draft Stormwater Code (Attachment C).

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**Table 2: Substantive Changes to Permissible Discharges (22.802.030)**

A. Conditionally Permissible Discharges to Drainage systems and Receiving Waters. Discharges from the sources listed below are permissible discharges only if the stated conditions are met and unless the Director of SPU determines that the type of discharge, directly or indirectly to a public drainage system, private drainage system, or a receiving water within or contiguous to Seattle city limits, whether singly or in combination with others, is causing or contributing to a violation of the City's NPDES stormwater permit or is causing or contributing to a water quality problem:

1. Discharges from potable water sources, including, but not limited to, flushing of potable water lines, hyperchlorinated water line flushing, fire hydrant system flushing, ~~and~~ pipeline hydrostatic test water, and washing of potable water storage reservoirs. Planned discharges shall be de-chlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments in the drainage system. No chemicals may be added, and settleable solids must be removed prior to discharge;

2. Discharges from swimming pools, spas, hot tubs, fountains, or similar aquatic recreation facilities and constructed water features, provided the discharges have been dechlorinated to a total residual chlorine concentration of 0.1 ppm or less, pH-adjusted and reoxygenated if necessary, volumetrically and velocity controlled to prevent resuspension of sediments in the drainage system, and thermally controlled to prevent an increase of temperature in the receiving water. Swimming pool cleaning wastewater and filter backwash shall not be discharged;

3. Discharges of street and sidewalk washwater when the surfaces are swept prior to washing, detergents are not used, and water use is minimized;

4. Discharges of water from routine external building washdown when detergents are not used and water use is minimized;

5. Discharges of water used to control dust when water use is minimized; and

6. Other non-stormwater discharges, provided that these discharges are in compliance with the requirements of a stormwater pollution prevention plan that addresses control of such discharges and is approved by the Director.

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B. Permissible discharges: Discharges from the sources listed below are permissible discharges unless the Director of SPU determines that the type of discharge, directly or indirectly to a public drainage system, private drainage system, or a receiving water within or contiguous to Seattle city limits, whether singly or in combination with others, is causing or contributing to a violation of the City's NPDES Municipal Stormwater Permit or is causing or contributing to a water quality problem: [*partial excerpt below; most changes to this subsection "B" relate to deletions of text that has been folded into subsection "A" above*]

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13. Discharges of tracing dye used to establish or verify a drainage or sewer connection.

New: underlined

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6. Added notification requirements related to testing for prohibited discharges (22.802.040.A): The proposed revisions require that any person conducting dye testing to establish or verify a drainage connection shall notify SPU prior to conducting the test. This will improve SPU processes and efficiencies by allowing SPU Water Quality Hotline staff to learn that dye can be expected in the drainage system.

**Chapter 22.803 – Minimum Requirements for All Discharges and All Real Property**

7. Added requirement to map property drainage, side sewer and plumbing infrastructure (22.803.020.A): The proposed revisions include language to make it explicit that, when requested to aid in applying the Stormwater Code, the owner must map "all drainage, side sewer and plumbing infrastructure on the property." This will improve the clarity and authority of the Stormwater Code.
8. Added site maintenance to the Minimum Requirements for Source Controls for All Real Property (22.803.030.G): The proposed revisions include a brief subsection requiring that businesses and public entities perform basic site maintenance activities (e.g., site sweeping, and inspecting loading and unloading areas). This will add clarity and authority to further prevent transport of pollutants off site via stormwater runoff.
9. Revised Minimum Requirements for Source Control for specific discharge locations (22.803.040): The proposed revisions clarify that these source control requirements apply to all discharges except those that drain only to the public combined sewer. This is already indicated in the current Source Control Technical Requirements Manual but is proposed to be added to the 2016 Stormwater Code for further clarity.

**Chapter 22.805 – Minimum Requirements for Projects**

10. Revised applicability of thresholds for Minimum Requirements for Projects to be based on "hard-surfaces" (22.805.030 – .060, 22.801): In accordance with the MS4 Permit, the proposed revisions change the applicability of thresholds from "impervious surface" to "hard surfaces," a new term required by Ecology. "Hard surfaces" include impervious surfaces, permeable pavements, and vegetated roofs.
11. Added requirements to protect stormwater BMPs during construction (22.805.020.D.19): In accordance with the MS4 Permit, the proposed revisions require protection of stormwater BMPs from sedimentation (through installation and maintenance of erosion and sediment control BMPs) and compaction during the construction phase of a project. The intent is greater protection of permanent stormwater BMPs, particularly for infiltration-based BMPs (which are particularly subject to damage from sedimentation) and vegetation-based BMPs that are prone to damage during construction.
12. Moved requirements for On-site Stormwater Management and soil amendment (22.805.020, etc.): In the proposed revisions, the requirement for projects to perform On-site Stormwater Management (currently "Implement Green Stormwater Infrastructure" in Seattle's Stormwater Code) has been moved out of the Minimum Requirements for All Projects (22.803.020) and is now included as a requirement in other Stormwater Code sections based on project type (i.e., Single-family Residential (SFR), Trail/Sidewalk, Parcel-based,

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Roadway). Similarly, the requirement to amend soils is relocated from its own specific provision to now be included based on project type (i.e., SFR, Trail/Sidewalk, Parcel-based, Roadway). This modification is for consistency with the MS4 Permit and to clarify that On-site Stormwater Management only applies to certain project types and does not apply to utility work or routine maintenance work.

13. Revised Threshold and applicability changes for Minimum Requirements for Single-Family Residential Projects (22.805.030): On-site Stormwater Management (currently "Implement Green Stormwater Infrastructure" in Seattle's Stormwater Code) is proposed to change from applying to all SFR projects, to applying to SFR projects as follows:

    a. On a lot most recently created, adjusted, altered, or otherwise amended by a plat or other lawful document recorded with the King County Recorder on or after January 1, 2016, and where that document either created the lot or reduced the size of the lot, either the total new plus replaced hard surface is 750 square feet or more or land disturbing activity is 7,000 square feet or more; or

    b. For any other project, either the total new plus replaced hard surface is 1,500 square feet or the land disturbing activity is 7,000 square feet or more.

    Given the above threshold changes and in response to the MS4 Permit, the City also proposes to remove the current 1,500 square foot impervious surface credit for SFRs. Note that the MS4 Permit threshold is set at 2,000 square feet of new plus replaced hard surface, but the City proposes the above thresholds – expected to result in more on-site stormwater management – to better address the types and sizes of development projects typical for Seattle and to make on-site, low impact development best management practices the preferred and commonly-used approach to site development, consistent with S5.C.5.b of the MS4 Permit.

14. Revised Minimum Requirements for Parcel-based Projects (22.805.050):

    a. Revised thresholds. In accordance with the MS4 Permit, On-site Stormwater Management (currently "Implement Green Stormwater Infrastructure" in the Seattle's Stormwater Code) is proposed to change from applying to 2,000 square feet new plus replaced impervious surface, to applying to parcel-based projects as follows:

        i. On a lot most recently created, adjusted, altered, or otherwise amended by a plat or other lawful document recorded with the King County Recorder on or after January 1, 2016, and where that document either created the lot or reduced the size of the lot, either the total new plus replaced hard surface is 750 square feet or more or land disturbing activity is 7,000 square feet or more; or

        ii. For any other project, either the total new plus replaced hard surface is 1,500 square feet or the land disturbing activity is 7,000 square feet or more.

        Note that the MS4 Permit threshold is set at 2,000 square feet of new plus replaced hard surface, but the City proposes the above thresholds – expected to result in more on-site stormwater management -- to better address the types and

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sizes of development projects typical for Seattle and to make on-site, low impact development best management practices the preferred and commonly-used approach to site development, consistent with S5.C.5.b of the MS4 Permit.

b. Added requirements for Discharges from Groundwater. The proposed revision includes new language for applicability of flow control when a project permanently discharges groundwater to some locations. This change incorporates provisions drawn from a current City Directors' Rule directly into the Stormwater Code.

c. Added requirements for water quality treatment. In accordance with MS4 Permit, the proposed revision will require treatment of both pollution-generating hard surfaces and pervious surfaces if water quality treatment is triggered for a project.

15. Revised Minimum Requirements for Roadway Projects (22.805.060):

a. Added infeasibility criteria to the Minimum Requirements for Roadway Projects (22.805.060.E). New language is proposed to account for the unique construction limitations posed by public roadway right-of-way work within an urban environment having existing infrastructure. The new language allows the reduction of on-site stormwater management, flow control, and water quality treatment requirements for roadway projects under certain conditions. Specifically, roadway projects will have reduced requirements for on-site stormwater management, flow control, and water quality treatment when it can be demonstrated that full compliance with those requirements is not feasible because "(a) complete installation would require that an existing major publicly or privately-owned infrastructure or utility element be relocated, or (b) the drainage control facility cannot be built and operated to discharge stormwater from the site under gravity flow conditions while meeting the applicable engineering standards." The proposed language includes additional details describing what constitutes "existing major infrastructure or utility elements" and requires that the project meet the applicable standards to the degree that the project can avoid the infeasibility described in this subsection 22.805.060.E. These Ecology-approved revisions address the same physical site limitation concerns addressed by the 2014 Washington Department of Transportation Highway Runoff Manual (WSDOT 2014).

b. Added requirements for Discharges from Groundwater. The proposed revision includes new language for applicability of flow control when a project permanently discharges groundwater to some locations. This change incorporates the provisions drawn from a current City Stormwater rule directly into the Stormwater Code.

c. Added requirements for water quality treatment. In accordance with the MS4 Permit, the proposed revision includes new language requiring treatment of both pollution-generating hard surfaces and pervious surfaces if water quality treatment is triggered for a project.

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16. Added a new section specific to On-site Stormwater Management (22.805.070): In relation to item #12 above, the current Stormwater Code requirements to "Implement Green Stormwater Infrastructure" are proposed to be revised to be consistent with the MS4 Permit and are moved to a new section titled On-site Stormwater Management. On-site Stormwater Management includes requirements to comply with either:

    a. On-site Performance Standard, or

    b. On-site List by project type

    This change is proposed for consistency with the MS4 Permit but also complements Seattle's unique urban environment.

    In addition, the current minimum size requirements for projects that trigger On-Site Stormwater Management in the right-of-way (i.e., Roadway Projects, Trail/Sidewalk Projects) are proposed to be removed for creek, wetland, and small lake basins. In these basins, Ecology does not allow a prohibition to installation based on minimum facility size for permeable pavement (2,000 square feet) and bioretention (500 square feet) as is allowed in the current Seattle Stormwater Manual. This will result in additional facilities within the right-of-way in these basins.

17. Added a new On-site Performance Standard (22.805.070.C): In accordance with the MS4 Permit (and per items #12 and #16 above), the proposed revisions include a new quantitative performance standard to meet the On-site Stormwater Management Requirements of 22.805.070. The proposed standard is similar to that specified in the MS4 Permit but is consistent with Seattle's existing flow control standards by targeting the pre-developed condition of "forested" or "pasture," depending upon existing hard surface coverage.

18. Added a new On-site List (22.805.070.D) stating specific BMP options and requirements for meeting the new On-site Stormwater Management Requirements of 22.805.070: The MS4 Permit allows two options for projects to achieve the On-site Stormwater Management Requirements (22.805.070): using a specified list of approved BMPs, or meeting a "Low Impact Development Performance Standard." Ecology's BMP list is presented in a mandatory evaluation order, and the project applicant is required to achieve 100 percent management of applicable hard surfaces, unless the applicant can demonstrate BMP infeasibility (with no cost feasibility consideration). The proposed revisions to the Stormwater Code include a Seattle-specific On-site List of BMPs (Seattle List) that is modified relative to Ecology's and meets MS4 Permit equivalency obligations. The Seattle List also better matches Seattle's local conditions, results in a similar volume of stormwater managed as the current Seattle GSI Directors' Rule, and provides additional flexibility compared to the Ecology list. Except where a difference is required for compliance with the MS4 Permit, the proposed Seattle List includes a range of BMPs similar to that found in Seattle's current GSI Directors' Rule. The proposed language and approach has been developed specific to conditions in the City of Seattle. For further information, a more detailed assessment of the City's options and preferences has been documented in a 2014 policy paper (Seattle 2014). Consistent with the MS4 Permit, Seattle's List can be superseded or reduced if the installation is in conflict with specific federal or state laws,

rules, and standards; special zoning district design criteria; public health and safety standards; transportation regulations; or tree and vegetation regulations.

19. Updated Wetland Protection Standard (22.805.080.B.1): In accordance with the MS4 Permit, the proposed revisions include updates to the Wetland Protection Standard. Since Ecology substantially changed its requirements for this standard, Seattle proposes to incorporate the new Ecology requirements and to add references to Ecology's "guidance sheets."

20. Slightly revised the Pre-developed Forested Standard (22.805.080.B.2) and Pre-developed Pasture Standard (22.805.080.B.3): The standards are proposed to be slightly revised to better complement the new On-site Performance Standard language proposed in 22.805.070.C. The technical requirements of the new On-site Performance Standard language require specific hydrologic modeling approaches that were not consistent with the 2009 "Forest" and "Pasture" standards. Therefore, minor revisions are proposed for improved efficiency for developers and city staff plan reviewers.

21. Updated the Enhanced Treatment requirements (22.805.090.B.5): In accordance with the MS4 Permit, the proposed revisions include updates to the Enhanced Treatment requirements. Specifically, the proposed revisions remove the previous broader references to "fish-bearing" waters and instead reference designations for "aquatic life use."

**Chapter 22.807 – Drainage Control Review and Application Requirements**

22. Revised application requirements language in Chapter 22.807.020.B.1.b: For projects with n offsite discharge point, the drainage control plan shall be prepared by a licensed civil engineer even if the project has less than 5,000 square feet of new or replaced hard surface.

**Chapter 22.808 – Stormwater Code Enforcement**

23. Slightly revised Stormwater Code Enforcement language in Chapter 22.808: Based on feedback from SPU and DPD inspectors, there are slight, mainly administrative, changes proposed for this Chapter. The proposed revisions will make enforcement less problematic and more consistent to implement for the City.

## Conclusion & Recommendation

All the proposed 2016 modifications to the Stormwater Code are either equivalent or unrelated to Ecology requirements in the MS4 Permit and have been developed in consideration of the best available science.

The Director of SPU and the Director of DPD recommend that the "2016 Revision to Stormwater Code" modifications be adopted.

## References

Ecology, Washington State Department of, 2012. Phase I Municipal Stormwater Permit: National Pollutant Discharge Elimination System and State Waste Discharge General Permit for discharges from Large and Medium Municipal Separate Storm Sewer Systems.

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Permit issued on 1, 2012, effective on August 1, 2013, and modified effective January 16, 2015.

Ecology, Washington State Department of, 2014a. Stormwater Management Manual for Western Washington. December 2014.

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