



January 19, 2018

Washington Department of Ecology
Water Quality Program
PO Box 47696
Olympia, WA 98504-7696

To whom it may concern,

The City of Seattle appreciates the efforts of Ecology to provide information and seek input on the preliminary draft Phase I NPDES Municipal Stormwater Permit requirements for 2019-2024. As the largest municipality in Washington State, Seattle takes its role as a regional leader in stormwater management seriously and is committed to improving the health of receiving waters.

Seattle has spent considerable time reviewing the proposed Draft Fact Sheet Language and Guidance for Special Condition S5.C.6 and Appendix 11. In concept, Seattle supports the development of a minimum performance standard for S5.C.6 Structural Stormwater Control to document a Permittee's progress toward addressing stormwater impacts to receiving waters through this permit requirement. After reviewing the proposal, Seattle's opinion is that Ecology's current proposal is not yet ready for use as an NPDES permit requirement. Additional refinement is needed to meet Ecology's intent to "reflect MS4 retrofit priorities as well as receiving water conditions and project effectiveness" (Ecology's guidance document for S5.C.6, p. 1) and avoid misdirecting significant municipal investments to projects that aren't the highest priority for addressing stormwater impacts to receiving waters

Seattle has reviewed the methods used to calculate Incentive Points and defined level of effort for the 2019-2024 permit cycle and has noted errors, inconsistencies, and lack of scientific rigor in these methods that need to be addressed before inclusion in the permit. Seattle understands that development of the methodologies to calculate the Incentive Points and defined level of effort is challenging, and, because of this, Seattle proposes that a stakeholder process be established to fully explore and evaluate how to best calculate the defined level of effort so that municipalities implement projects that have the greatest ability to decrease the impacts of stormwater on receiving waters and are affordable for the customers paying stormwater fees. Detailed comments and suggestions are provided in Attachment 4 of this letter.

Western Washington's approach to regional monitoring, Stormwater Action Monitoring, is a bold experiment that was implemented with success during the current permit term. The Stormwater Action Monitoring program has made great progress toward meeting its workplan objectives, and Ecology deserves much credit for this. Seattle has been a willing participant in the program but remains concerned about the amount of funding that Seattle's customers are paying in for the regional program. Seattle is providing comments recommending that adjustments be made to the per capita costs to account for population growth and to collect a level of payment that supports a regional program while allowing municipalities to continue local monitoring programs. Detailed comments and suggestions are provided in Attachments 7 of this letter.

Seattle has reviewed the Education and Outreach, IDDE tracking and reporting, Mapping and Controlling Runoff – Site and Subdivision Scale sections as well and is providing comments in Attachments 1, 2, 3, 5 and 6 to this letter. These comments are provided to help Ecology revise and refine these permit sections for the draft Permits.

Thank you again for working with Seattle and the other permittees to develop effective permit requirements to protect our environment. If you have any questions about these comments or would like to meet and discuss our comments, please contact Kate Rhoads, kate.rhoads@seattle.gov.

Cordially,



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Attachments

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Attachment 1- City of Seattle General Comments on the Proposed 2019-2024 Phase I MS4 Permit language

Seattle is providing the following general comments.

Guidance

Include all requirements in the Permit, rather than relying upon “guidance” of the type that accompanies the preliminary draft. It would be insufficient to include Permit requirements, or key details that support the requirements, in a free-standing document or a Fact Sheet. For necessary certainty and transparency, Ecology should – or perhaps must – include a final, streamlined version of the “guidance” information in the Permit or an Appendix. See *Puget Soundkeeper Alliance, et al., v. Ecology, et al.*, PCHB Nos. 07-021, 07-026, 07-027 07-028, 07-029, 07-030 & 07-037, “Order on Dispositive Motions (Phase I Municipal Stormwater Permit)” at 27-30 (April 8, 2008) (“Permit Modification (Issue F.6)”).

Attachment 2 - City of Seattle Comments on the Proposed 2019-2024 Phase I MS4 Permit language for S5.C2. Mapping

Mapping Attributes

Seattle recommends that the attributes in the features GIS table the pipes' do not contain attributes associated drainage areas or land use. In most cases, the drainage pipe will cross over several drainage areas and over several land uses. Seattle suggest that this section be broken out to include an attributes section and a section that identifies additional mapping.

The requirement to map drainage areas and land uses as an attribute is included in both Section S5.C.2.a.v of the permit and on Table 1 of the "Draft Mapping Guidance for Phase I and Western Washington Phase II Municipal Stormwater Permittees". The language in the mapping guidance must match the language in the permit.

- Section S5.C.2.a.v. Seattle recommends the following change:
Tributary conveyances to all known outfalls and discharge points with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems. For Counties, this requirement applies to urban/higher density rural sub-basins. For Cities, this requirement applies throughout the City. The permittee shall also map associated drainage areas and land uses. The following attributes shall be mapped:
(1) Tributary conveyance type, material, and size where known
~~(2) Associated drainage areas~~
~~(3) Land Uses~~

"Permanent Stormwater Facility" – Proposed Use in Mapping and O & M

At pages 1-2 of the draft proposal, Ecology introduces a new concept: "Permanent stormwater facilities are structures or devices designed or used to control stormwater flows, or remove pollutants from stormwater, or both." Unfortunately, this definition is too broad and not clear enough to allow permittees to successfully identify what is covered. It appears, from the draft guidance at p. 7, that Ecology's intent is to newly require that permittees map retrofits that are like *"stormwater treatment and flow controls BMPs/facilities"* but may not precisely meet MR #6 or #7 or both. If so, Ecology should simply state that in the definition. Seattle suggests:

- Revise the proposed new definition based on *"stormwater treatment and flow controls BMPs/facilities"*:

Permanent stormwater facilities means detention facilities, treatment BMPs/facilities, bioretention, vegetated roofs, and permeable pavements that are constructed as retrofits [after XXX date] and may not precisely meet the new or redevelopment standards. ~~are structures or devices designed or used to control stormwater flows, or remove pollutants from stormwater, or both"~~

As an alternative, Ecology should simply amend the existing definition, and not propose any new term or definition. Seattle suggests:

- No new definition or mention of “permanent stormwater facilities” in the Permit.
- Amend existing definition:
“Stormwater Treatment and Flow Control BMPs/Facilities means detention facilities, treatment BMPs/facilities, bioretention, vegetated roofs, and permeable pavements that help meet minimum requirement #6 (treatment), #7 (flow control), or both, or that are constructed as retrofits [after XXX date] and may not precisely meet the new or redevelopment standards.”

Permittees can only map features that are known. Therefore, Ecology should add “known” before each time that “permanent stormwater facilities” (if used) or “tributary conveyances” or “emergency overflows” appears in S5.C.2.a.iii.

Finally, Ecology states at page 2 of the proposal that “permanent stormwater facilities” will be also used in the operations and maintenance requirements of the Permit “to address inspections of municipally owned facilities, as well as facilities regulated by the Permittee.” (Ecology p. 2.) This is a surprise. Drafting for O & M is not provided. Seattle objects to changing any trigger for O & M because those requirements were carefully and intentionally drafted for the 2013-2018 Phase I permits. Seattle will have further comments at the time that Ecology drafts any O & M language changes.

Deadline to add data, explanation for S5.C.2.b.i

Seattle does not object to revised S5.C.2.b.i but objects to any explanation that is not consistent with the permit language. Seattle suggests these changes to Ecology’s explanation at p. 2 of the draft proposal:

“By the date included in the preliminary permit language, known ~~As outfall records are updated or added, additional~~ information describing the size of the outfall and the material that it is made out of must be added. This does not mean that Permittees must re-survey all known MS4 outfalls by the date included in the preliminary permit language. ~~The, but that as this information becomes available to the Permittee, might learn this information through inspections, maintenance, project approvals, etc., this attribute information would be added to the outfall records.~~”

Website reference, S5.C.2.c

Website references should be deleted to improve clarity and understanding. All permit terms must be certain at the time the permit is issued, subject to public notice and appeal, and must not be capable of being changed during the permit term. Seattle suggests this deletion:

“The required format for mapping is electronic with fully described mapping standards. ~~An example description is available on Ecology’s website.~~”

Attachment 3- City of Seattle Comments on the Proposed 2019-2024 Phase I MS4 Permit language for S5.C.4 Controlling Runoff

1. For Phase I jurisdictions, Ecology must continue its current practice to review and approve Phase I ordinance and manual submittals for equivalency, and amend Appendix 10 to document equivalency. This is needed to provide certainty to MS4 permittees and to the public, and so that other municipalities may continue to use approved, equivalent manuals. Ecology should match the current permit for any deadlines and for the approval process. Phase I S5.C.5 and App. 10.
 - a. Ecology states that SWMMWW changes will result “substantive content changes” – though limited - as well as “clarify,” “correct,” and significantly reorganize the text. (Ecology proposal, p. 1.) Substantive changes require Ecology review for Phase I.
 - b. It would be destabilizing and inequitable to change the course Ecology has established. Phase I MS4s serve large populations and also provide important models for other urban jurisdictions, such as Phase II governments.
 - c. Phase I review will be a manageable time commitment assuming that, as Ecology states, substantive SWMMWW changes are minor.
2. Seattle defers comments on the SWMMWW redraft until the full manual is available for review. SPU does not oppose Ecology reorganizing the manual or editing it for clarity.
3. For clarity of the definition of PGPS in Appendix 1, please consider the following punctuation changes:

“Pollution-generating pervious surface” means ~~((any))~~ those non-impervious surfaces considered to be a significant source of pollutants in drainage water. Such surfaces include those that are subject to: vehicular use ~~((,))~~; industrial activities ~~((,or))~~ ; storage of erodible or leachable materials, wastes, or chemicals, and that receives direct rainfall or run-on or blow-in of rainfall ~~((,))~~ ; use of pesticides ~~((and))~~ or fertilizers ~~((,))~~ ; or loss of soil. Typical pollution-generating pervious surfaces include lawns, landscaped areas, golf courses, parks, cemeteries, and sports fields (natural and artificial turf).

“Pollution-generating impervious surface” means those impervious surfaces considered to be a significant source of pollutants in drainage water. Such surfaces include those that are subject to: vehicular use; certain industrial activities; or storage of erodible or leachable materials, wastes, or chemicals, and ~~((which))~~ that receive direct rainfall or the run-on or blow-in of rainfall ~~((;))~~. Such surfaces also include roofs subject to venting of significant sources of pollutants ~~((;))~~ and metal roofs unless coated with an inert, non-leachable material (e.g., baked-on enamel coating). ...”

4. Since sidewalk and/or trail projects help increase non-pollution generating transportation options (e.g. walking, biking), and are often located in areas that will meet the requirements of Sheet Flow or Concentrated Flow Dispersion which require minimal carbon-producing maintenance (as opposed to permeable pavement), and since Dispersion BMPs are significantly less expensive to build, please consider the following changes to MR#5:

4.5 Minimum Requirement #5: On-site Stormwater Management

List #1: On-site Stormwater Management BMPs for Projects Triggering Minimum Requirements #1 through #5

For each surface, consider the BMP's in the order listed for that type of surface. Use the first BMP that is considered feasible. No other On-site Stormwater Management BMP is necessary for that surface. Feasibility shall be determined by evaluation against:

1. Design criteria, limitations, and infeasibility criteria identified for each BMP in the SWMMWW; and
2. Competing Needs Criteria listed in Chapter 5 of Volume V of the SWMMWW.

Other Hard Surfaces *:

1. Full Dispersion in accordance with BMP T5.30 in Chapter 5 of Volume V of the SWMMWW.
2. Permeable pavement² in accordance with BMP T5.15 in Chapter 5 of Volume V of the SWMMWW, or Rain Gardens in accordance with BMP T5.14A in Chapter 5 of Volume V or Bioretention in accordance with Chapter 7 of Volume V of the SWMMWW. The rain garden or bioretention facility must have a minimum horizontal projected surface area below the overflow which is at least 5% of the area draining to it.
3. Sheet Flow Dispersion in accordance with BMP T5.12, or Concentrated Flow Dispersion in accordance with BMP T5.11 in Chapter 5 of Volume V of the SWMMWW.

List #2: On-site Stormwater Management BMPs for Projects Triggering Minimum Requirements #1 through #9

For each surface, consider the BMPs in the order listed for that type of surface. Use the first BMP that is considered feasible. No other On-site Stormwater Management BMP is necessary for that surface. Feasibility shall be determined by evaluation against:

Other Hard Surfaces *:

1. Full Dispersion in accordance with BMP T5.30 in Chapter 5 of Volume V of the SWMMWW
2. Permeable pavement² in accordance with BMP T5.15 in Chapter 5 of Volume V of the SWMMWW
3. Bioretention (See Chapter 7, Volume V of the SWMMWW) facilities that have a minimum horizontally projected surface area below the overflow which is at least 5% of the of the total surface area draining to it.
4. Sheet Flow Dispersion in accordance with BMP T5.12, or Concentrated Flow Dispersion in accordance with BMP T5.11 in Chapter 5 of Volume V of the SWMMWW

* For projects constructing only trails or sidewalks that are less than 12-feet in width, any BMP may be considered regardless of the BMP order listed above.

5. The use of permeable pavement in hard surfaced sports facilities increases the frequency and severity of injury to users due to surface roughness. Therefore, please consider adding the following Infeasibility Criteria to V-5.3.1 BMP T15: Permeable Pavements:

The following criteria can be cited as reasons for a finding of infeasibility without further justification (though some require professional services to make the observation):

- Within the active use zone of a skate park, bike park, sport court, spray pad, playground or other recreational surface where permeable pavement poses a safety risk and increases the risk of injury to users.

Attachment 4 - City of Seattle Comments on the Proposed 2019-2024 Phase I MS4 Permit language for S5.C.6. Structural Stormwater Controls

Summary

Seattle shares with Ecology and other stakeholders a vision of a healthy Puget Sound region. S5.C.6 (Structural Stormwater Control – SSC) is an important element of a Permittee’s SWMP, and Seattle has demonstrated its commitment through millions of dollars of investment in Seattle’s Street Sweeping for Water Quality Program and recent CIP projects to address high priority stormwater impacts to receiving waters.

In concept, Seattle supports the development of a minimum performance standard for S5.C.6 Structural Stormwater Control to document a Permittee’s progress on this requirement. However, Seattle is concerned that Ecology’s current proposal is not yet ready for use as an NPDES permit requirement due to refinements needed to the Incentive Point factors and defined level of effort (details on concerns related to these items can be found in below sections: “**Incentive Points – Additional Refinements Needed**” and “**Defined Level of Effort Calculations – Errors**”). Additional refinement is crucial to:

- Meet Ecology’s intent for S5.C.6 and provide a sound groundwork for future permits.
- Avoid misdirecting significant municipal investments to projects that aren’t the highest priority for addressing stormwater impacts to receiving waters. The Incentive Point approach is not sufficiently developed to be the basis for Permittees’ SSC investment priorities.
- Avoid setting an unreasonable defined level of effort. For example, under Ecology’s current proposal, during the first 3.5 years of the next permit period, a Phase I Permittee would need to construct the equivalent of two of Kitsap County’s Manchester Stormwater Park facilities and have another six equivalent facilities at 60% design (additional information provided in “**Defined Level of Effort Calculations – Errors**” section below).

Seattle recommends:

1. Ecology should not include a mandatory level of effort in the 2019-2024 Phase I and II Permits.
 - a. Instead, Permittees and Ecology should commence a stakeholder process, with consultant facilitation and analytical support, to refine the Incentive Point approach and to determine an appropriate defined level of effort for the following Permit term.
 - This could follow the highly successful model Ecology used to formulate LID requirements during 2009-2010.
 - SAM Effectiveness Monitoring funds collected under the MS4 Permits would appropriately be used to fund the necessary consultant support.
 - Permittees (Phase I and Phase II) and other stakeholders would be invited to participate to provide Ecology the benefit of the varied experience and expertise that has developed regionally and nationally.
 - Seattle’s idea for an efficient process is explained in more detail in below section: “**Facilitated Stakeholder Process**”
 - b. This stakeholder process is needed in any case. However, if Ecology is unable to omit a defined level of effort from the 2019 Permits, then Ecology should:
 - Require a defined level of effort that shows progress but is not so high that it significantly drives Permittee priorities and investments before the Incentive

Point approach can be refined. This would avoid Permittees using limited funding to chase “Incentive Points” instead of pursuing the highest priority projects to improve water quality. If needed and before draft Permit issuance this summer, the Phase I municipalities could work with Ecology to propose a defined level of effort based on actual data from current S5.C.6 projects – a necessary first step improvement.

- Provide a flow control standard for urban creeks that have had at least 40% total impervious area since 1985 by allowing the use of equivalent Ecology approved manual
- Allow equivalent models to WWHM (e.g., MGS Flood) for Incentive Point analysis.
- Include all Permit requirements, including “guidance” information, in the Permit at S5.C.6 or an Appendix

Seattle’s key concerns regarding Incentive Points being not developed enough to be the basis for SSC investment priorities are explained below at **“Incentive Points – Additional Refinements Needed.”** Seattle’s concerns regarding the proposed “defined level of effort” being erroneously calculated too high are explained below at **“Defined Level of Effort Calculations – Errors.”** Seattle’s idea for an efficient **“Facilitated Stakeholder Process”** is explained in more detail below. Details on other S5C6 comments above, are provided at **“Additional S5C6 Comment Details”** below.

More detail:

Incentive Points - Additional Refinements Needed

The Retrofit Incentive Point calculations need additional refinements to more accurately reflect a project’s relative ability to reduce stormwater impacts to receiving waters before being made the basis for structural stormwater control priorities. When the 2013-2018 Phase I Permit was issued, the Incentive Point Factors in Appendix 11 were simply Ecology’s best guess about the relative value of the different project types. As examples:

- A Runoff Treatment Project that provides basic treatment receives a 1.5 Incentive Factor while a project that provides enhanced treatment receives a 1.75 Incentive Factor. That enhanced treatment should receive more points may be valid, but why 0.25 more? Why not 0.5 more? Or 0.1 more?
- When comparing other project types, the basis for the Incentive Factor assignments become even more uncertain. How to value flow control versus treatment? How to value other project types relative to each other?

The Incentive Point Factors should be refined by gathering and analyzing information on the performance of the various project types in various settings. This appears to have been Ecology’s original intent during 2012 Permit reissuance; the Fact Sheet states that Ecology would “refine this standardized reporting approach as necessary after evaluating how well it works during this permit cycle.” (Fact Sheet for the Phase I Municipal Stormwater Permit (November 4, 2011), p. 93) Unfortunately, this analysis has not occurred.

In addition, the method to calculate the Flow Control Incentive Points and Runoff Treatment points needs to be adjusted so it doesn’t double penalize projects that don’t treat the full basin area. Currently the associated Flow Control and Runoff Treatment ratios decrease the “equivalent area” and then the

“Retrofit Incentive Points” are scaled based on the ratios. The ratios should not be considered a second time in the Incentive Factor calculations. For example, all Flow Control Projects in a known flow control problem area and all Runoff Treatment Benefit projects in a known water quality problem area should be assigned 1.5 Incentive Factors.

Defined Level of Effort Calculations - Errors

Ecology has indicated that the intent in setting a Retrofit Point Achievement level was to reflect the current level of effort based on S5.C.6 2016 Annual Reporting by Phase I jurisdictions. Because Ecology had insufficient data on the Phase I S5.C.6 projects, the method used to set the proposed level of effort is primarily based on project data in Ecology’s Stormwater Grant database. Based on Seattle’s review, the proposed level of effort is set too high due to errors and weak assumptions in the methodology and due to projects in Ecology’s Stormwater Grant database not being representative of Phase I SSC projects. This is problematic because:

- Does not meet Ecology’s intent to represent the current level of effort
- Proposed level of effort is unaffordable to our customers. Affordability of drainage rates for Seattle Public Utilities’ customers is a serious concern and one that Seattle is actively working on. Regulatory and other requirements continue to require rate increases, which are most impactful to SPU customers living on fixed income or at or near the poverty level. Seattle City Council has recently required Seattle Public Utilities to hold rate increases steady so that the impact to our customers is minimized.
- Proposed level of effort is unrealistic due to time constraints. Solely considering the time needed to acquire land and obtain needed permits in a highly urban environment, it is not feasible to construct projects to meet the defined level of effort within the 3.5 year window (see two project examples below).
- May drive permittees to use limited resources to chase “Incentive Points” instead of pursuing the highest priority projects to improve water quality.

Two well-respected regional projects that demonstrate how the proposed level of effort is set too high are described below:

- **Capitol Hill Water Quality Facility.** This Seattle project is a multi-phase collaboration with a developer that utilizes biofiltration and bioretention along four urban blocks to partially treat a highly urbanized 394-acre basin which drains to Lake Union. The project took approximately 14 years to design and construct at a cost of approximately \$12 million. Under Ecology’s current proposal, the Capitol Hill Water Quality Facility would get approximately 105 Incentive Points. To meet Ecology’s proposed level of effort, in the first 3.5 years of the next Permit period, a Phase I Permittee would need to construct the equivalent of three of these facilities and have another ten equivalent facilities at 60% design.
- **Manchester Stormwater Park.** Although not a Phase I S5.C.6 project, this Kitsap County project is very well known and respected throughout the region. It provides enhanced treatment for approximately 120 acres that drain to Puget Sound. Under Ecology’s current proposal, this project would be anticipated to get approximately 180 Incentive Points. To meet Ecology’s proposed level of effort, in the first 3.5 years of the next Permit period, a Phase I Permittee would need to construct the equivalent of two of these facilities and have another six equivalent facilities at 60% design.

Other specific concerns and errors that Seattle discovered related to Ecology's methodology include:

- Actual projects completed: The number of projects used in Ecology's calculation should have been reduced from 73 to the actual number of projects completed during the Permit period (estimated to be about 50). Ecology's analysis assumed 73 projects based on Permittee report projects under the current permit. However, not all of these projects are being constructed during the current Permit term.
- Ratio for performance period: Ecology's analysis was based on the number of projects during the 5-year permit period. However, per Ecology, there will only be a 3.5-year performance period under the 2019 Permit. Thus, the overall points required should have been ratioed to the performance period (i.e., 3.5/5 years)
- Both Runoff Treatment (MR 6) and Hydrobenefit (MR 7) Incentive Points are incorrectly assigned to all projects in Ecology's analysis. This is unrealistic as many structural stormwater control projects only provide runoff treatment or hydrobenefit – but not both (e.g., projects draining to flow-exempt receiving waters do not require flow control).
- Too many points are assigned to projects for LID (MR5) in Ecology's analysis. The MR5 requirements is all or nothing and has the highest Incentive Factor multiplier (2.0). The average randomly generated project area is approximately 70 acres; however, projects that meet the LID requirement are most likely going to be small acreage. Thus, too many points are assigned for Hydrobenefit MR5 in Ecology's synthesized data. Also, Ecology's assumption that the average LID equivalent area is equal to the average flow control area is likely erroneous given no information on meeting LID standard in grant database. Per discussions with other Phase I permittees, no projects reported on in S5C6 during the current Permit period meet the LID standard.
- Benefit ratios should have been related to project basin area. In developing its synthesized data set, Ecology did not account for the high likelihood that benefit ratios are related to project basin area. It is more likely that larger projects will have a lower benefit ratio (as its harder to build retrofits for large basins that address the entire basin) and smaller projects will more likely have higher benefit ratios. However, in Ecology's analysis, the basin area and benefit ratio are randomly generated independently so there is no relationship between the two. This results in the Incentive Points being over estimated.

In addition, Ecology's Stormwater Grant database is likely not representative of Phase I S5.C.6 projects. Seattle does not have access to analyze the database's representativeness, but here are some questions related to its appropriateness in Ecology's analysis: Are grant projects typically smaller (easy to do with one grant) or larger (would go after grant only for big projects)? Are grants applied for more typically by cities or counties which would do different types of retrofitting? Are the grants mainly Phase Is or Phase IIs (which would likely have quite different types of projects than Phase Is)? Without a scientific comparison that supports its representativeness, the grant database should not be used as a surrogate for S5.C.6 projects.

Facilitated Stakeholder Process

Seattle believes that a facilitated stakeholder process is best for the region given the difficulty of the task of developing a scientifically supported Incentive Point methodology and setting an appropriate defined level of effort. Washington State will once again be leading the advancement of stormwater

management - no effort in the country has yet been able to develop a structural retrofitting metric and defined level of effort for MS4s. It is a complex and challenging task that requires evaluating the best scientific information on performance and benefit of different project types in different environmental settings (e.g., rural vs. urban, condition and beneficial uses of receiving waters, pollutants of concern for receiving waters). Ideally, Phase I contributions to the SAM Program Effectiveness could be earmarked to fund consultant facilitation and technical support for this stakeholder process. Alternatively, Phase I and II Permittees could work together to advocate that this stakeholder project be chosen for SAM Program Effectiveness funding.

Additional S5C6 Comment Details

Additional details on some of the comments from the Summary are presented below:

- Ecology should provide a standard for urban creeks that have had at least 40% total impervious area since 1985 by allowing the use of an equivalent Ecology approved manual. In the *“Phase I Municipal Stormwater Permit Guidance for Structural Stormwater Control Program: Draft Fact Sheet Language and Guidance for Special Condition S5.C.6 and Appendix 11 as proposed for preliminary review and comment (October 3, 2017 (Revised October 24, 2017))”*, or in the permit, the following text should be added to Step 2 of the Flow Control (MR#7) Benefit Ratio and Equivalent Area Process (p. 13) to provide a standard for urban creeks that have had at least 40% total impervious area since 1985.

“Use the Western Washington Hydrology Model (WWHM 2012) and calculate the amount of retention/detention storage that would be required to meet the Standard Flow Control Requirement (refer to Permit Appendix 1, Section 4.7 *or equivalent Ecology approved manual*) (e.g., match developed discharge durations to applicable pre-developed durations for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow)”

- Equivalent models to WWHM (e.g., MGS Flood) should be allowed for Incentive Point analysis. This is especially true for more complex facilities that have multiple flow splitters and treatment and flow control processes which are more appropriately modeled in MGS Flood. Seattle typically uses MGS Flood to model our SSC facilities, not WWHM. Additionally, models in WWHM using the SPU 158-year time series with bioretention facilities takes approximately 1-hour per run, making it difficult and time consuming to iteratively size a facility to evaluate flow control incentive points. In MGS Flood, each model run takes approximately 10 seconds to run which makes iterative analysis more feasible. When trying to evaluate Incentive Points for current SSC projects, Seattle had problems with WWHM crashing, resulting in the need to re-build model files.
- Include all Permit requirements: Seattle will defer track-changes comments about Ecology’s SSC “guidance” information until it has been reworked. It would be insufficient to include Permit requirements, or key details that support the requirements, in a free-standing document or a Fact Sheet. For necessary certainty and transparency, Ecology should – or perhaps must – include a final, streamlined version of the “guidance” information in the Permit at S5.C.6 or an Appendix. See [Puget Soundkeeper Alliance, et al., v. Ecology, et al., PCHB Nos. 07-021, 07-026, 07-027 07-028, 07-029, 07-030 & 07-037, “Order on Dispositive Motions \(Phase I Municipal Stormwater Permit\)” at 27-30 \(April 8, 2008\) \(“Permit Modification \(Issue F.6\)”](#)).

Attachment 5- City of Seattle Comments on the Proposed 2019-2024 Phase I MS4 Permit language for S5.C.8. IDDE Tracking and Reporting

Seattle suggests that Ecology tie annual reporting to existing S5.C.8; Ecology's proposal is unfortunately overbroad. It is unreasonable to require even a sophisticated Phase I to report on "all" "potential" illicit discharges "found by or reported to" it. It is also unreasonable to expect reporting, even for confirmed spills and illicit connections, of all the information necessary to populate the WQWebIDDE format. Collecting, assembling and validating extra data would divert permittees' limited resources from active IDDE efforts and is out of scale with S5.C.8. The new requirements would force permittees to risk inadvertent noncompliance and would create the incentive to be passive. That's because a permittee which actively encourages the public to report potential problems would have a heavier reporting burden and would be more vulnerable to someone claiming that the permittee left details out of its annual report. All details of the WQWebIDDE format must be included in the permit, to provide adequate notice and opportunity for appeal, and must not change during the permit term.

Seattle suggests the following and is willing to work with Ecology on further refinements and WQWebIDDE specifics:

Proposed permit language revisions to Ecology proposal for Phase I S5.C.8.g:

"... In the annual report, each permittee shall submit certain information in the permittee's possession for complaints, reports, or monitoring incidents that under S5.C.8.d.iv triggered an obligation to respond, investigate, refer or eliminate data for all of the potential illicit discharges, including spills and illicit connections, found by or reported to the Permittee during the previous calendar year. The summary shall should include the information and formatting specified in, and follow the schema described in, WQWebIDDE, as reasonably interpreted by the permittee based on the information in its possession. Applicable data shall be reported for all potential incidents, regardless of whether G3 notification was required, whether an illicit discharge was confirmed, or whether follow-up action was required by the Permittee. Each permittee may either use their own system or WQWebIDDE for recording this data. Final submittal must follow the schema described in WQWebIDDE."

Proposed permit language revisions to Ecology proposal for Phase I Q48:

"Attach a zipped xml file with data information describing the actions taken to respond, investigate, refer and investigate, characterize, trace and eliminate as required by S5.C.8.d.iv each potential illicit discharge found by or reported to the permittee. The submittal should must include all of the applicable information and formatting specified in, and must follow the schema described in, WQWebIDDE, as reasonably interpreted by the permittee based on the information in its possession."

Attachment 6 - City of Seattle Comments on the Proposed 2019-2024 Phase I MS4 Permit language for S5.C.10 . Education and Outreach Program

Seattle requests that Ecology please clarify that a jurisdiction may decide to work regionally, which would mean it must choose to adopt one or more elements of a regional program and then must implement the chosen elements at the local level. The Permit also should express that if a Permittee chooses to meet requirements using regional elements, it must make a thoughtful attempt to work regionally -- in other words, "must participate in the regional group." We recommend the following change:

10. Education and Outreach Program

The SWMP shall include an education and outreach program designed to:

- Build general awareness about impacts from, and methods to address and reduce, stormwater runoff;
- ~~Affect~~ Effect behavior change to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts; and
- Create stewardship opportunities.

Permittees may choose to meet these requirements individually or as a member of a regional group. Regional collaboration on general awareness or behavior change programs, or both, includes Permittees developing a consistent message, determining best methods for communicating the message, and, when appropriate, creating strategies to effect behavior change. If a permittee chooses to adopt one or more elements of a regional program, it must participate in the regional group and implement each chosen element at the local, jurisdictional level. ~~Each Permittee shall implement what is developed regionally at the local jurisdiction.~~

S5.C.10.b (Note that the subsection appears to be mis-numbered and is "**S5.C.10.a**" in current Permit.)

Seattle supports the idea of targeting education to pollutants of concern as determined by the permittee.

S5.C.10.b.i (1)

It is important to consider service equity in stormwater E&O programs. Adding "vulnerable" or "underserved population" to the first parenthetical could help. In Seattle's experience, having the "(including school age children)" language in the current Permit has created incentive to improve and expand school age programming. Seattle recommends the following change:

i. General awareness. To build general awareness, Permittees shall target the following audiences and subject areas:

(1) Target Audiences: General Public (including school age children and underserved populations), and businesses (including home-based and mobile business). Subject areas:

- General impacts of stormwater on surface waters.

- Impacts from impervious surfaces.
- LID principles and LID BMPs.
- Opportunities to become involved in stewardship activities.

S5.C.10.b.ii

Seattle agrees that providing the flexibility to target specific behavior changes is a good evolution from requiring that all the listed behaviors be addressed. Seattle supports language that allows jurisdictions latitude in building a robust behavior change program.

S5.C.10.b.ii (1)

It is important to consider service equity in stormwater E&O programs. Seattle recommends adding “underserved population” to the list of target audiences.

Seattle recommends the following changes:

- (1) Target audiences: Residents, landscapers and property managers/owners, school age children, underserved populations, businesses (including home based and mobile businesses), or other audiences. BMPs for:

- Use and storage of automotive chemicals, hazardous cleaning supplies, carwash soaps, and other hazardous materials.
- Equipment maintenance.
- Prevention of illicit discharges.
- Yard care techniques protective of water quality.
- Use and storage of pesticides and fertilizers and other household chemicals.
- Carpet cleaning and auto repair and maintenance.
- Vehicle, equipment, and home/building maintenance.
- Pet waste management and disposal.
- LID principles and LID BMPs.
- Stormwater facility maintenance.
- Dumpster and trash compactor maintenance.
- Other behavior that the Permittee identifies as a specific local concern.

S5.C.10.c

Seattle likes the focus on community based social marketing and thinks it can be a good and effective tool.

S5.C.10.d

Seattle recommends that the dates and requirements be summarized into an easily readable table included in this section. Having a summary table is extremely helpful.

Attachment 7 - City of Seattle Comments on the Proposed 2019-2024 Phase I MS4 Permit language for S8. Monitoring and Assessment.

S8.A – Seattle appreciates Ecology providing clarity on the types of monitoring that are not required to be submitted to meet this special condition.

S8.B. – Regional Status and Trends Monitoring

Seattle appreciates Ecology’s and Stormwater Work Group’s (SWG) continuing efforts to develop an improved approach to permit-required monitoring. Seattle is supportive of the regional approach to monitoring developed by SWG and Ecology. From a budgeting standpoint, it is acceptable to continue annual contributions rather than skipping a year.

As the largest City in the State, Seattle continues to have concerns about the population-based cost allocation methodology. Seattle, like all Phase I municipalities except King County, has experienced population growth over the last Permit term. The approach to spread the annual payments over 5 years in this permit term does reduce the City’s annual payment amount, however the total payment amount will increase by almost \$265,000 during the permit term. Overall, SAM will receive nearly \$1M in additional funding over the permit term if the proposed per capita amounts remain in place.

Affordability of drainage rates for Seattle Public Utilities’ customers is a serious concern and one that Seattle is actively working on. Regulatory and other requirements continue to drive rate increases, which are most impactful to SPU customers living on fixed income or at or near the poverty level. Seattle City Council has recently required Seattle Public Utilities to hold rate increases steady so that the impact to our customers is minimized. Seattle recommends that SAM maintain the current, 2013-2018 Permit level of funding for S8.B; to accomplish that, the allocated annual per capita cost must be reduced from the proposed \$0.1954 to \$0.175. This adjustment will allow SAM to maintain roughly the current level of funding that was received during the 2013-2018 Permit term, which resulted in a robust status and trends monitoring program, and also will help municipalities keep drainage rates affordable. Table 1 details the payment amounts of the 2012 permit, Ecology Proposal and SPU Proposal.

S8.C - Stormwater Management Program Effectiveness and Source Identification Studies

Seattle reiterates concerns about affordability for SPU customers and recommends that the changes be made to the amount of funding allocated to S8.C. 3. a. During the 2012 permit term the amount of funding collected by Ecology for effectiveness studies exceeded the budget for studies submitted so that Ecology and the Stormwater Action Monitoring program needed to seek a second round of studies. Many of these studies are just beginning and will continue into the next permit term. Based on this, Seattle recommends that the total amount of funding collected for S8.C.3.a be reduced for the 2019-2024 permit term. The proposed allocation per capita will maintain the current projects and allow for new projects to begin as others are finished. This approach will balance the level of effort and funding with the administrative capacity of Ecology and SAM. To meet this reduction, Seattle proposed that the allocated annual per capita costs for S8.C studies be reduced from the proposal of \$0.3556 to \$0.15. Table 1 details the payment amounts of the 2012 permit, Ecology Proposal and SPU Proposal.

S8.C.3.c

Seattle supports the continuation of Effectiveness Studies Option #3 and appreciates that Ecology decreased the annual payment cost for this portion of SAM monitoring.

Call out box on page 4 of 8: S8.D funds.

Seattle agrees that the requirement funding for S8.D should be eliminated from the permit. Seattle supports that a small portion of S8.C funds be used to continue to support analysis of IDDE incident tracking data. Seattle recommends that a proposal be developed and approved by the Stormwater Work Group to continue this work using S8.C funds.

Call out Box on Page 3 – updates to Appendix 9

Seattle does not support adding total PCBs to the runoff characterization list using Method 1668C. Analytical method 1668C is not a U.S. Environmental Protection Agency-approved analytical method and therefore has no place in an NPDES permit. At minimum, it is regulatory fact that data analysis using an unapproved analytical method cannot be used to judge NPDES permit compliance; Ecology should indicate the same in any NPDES permit that contains a reference to an unapproved method.

Table 1. Comparison of 2012, Ecology proposed 2019 costs and SPU proposed 2019 Costs

2013 Permit Status and Trends	2013 Permit Effectiveness	2013 Permit SIDAR	2013 Permit Total	2019 Ecology Status and Trends	2019 Ecology Effectiveness	2019 Ecology Total	2019 SPU Status and Trends	2019 SPU Proposed Effectiveness	SPU proposed Total
\$3,638,710	\$6,299,238	\$677,250	\$10,615,198	\$4,353,255	\$8,737,995	\$13,091,250	\$3,898,770	\$3,685,880	\$7,584,650