



November 14, 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 Formal Draft Phase I NPDES Municipal Stormwater Permit (Permit) requirements for 2019-2024 and the Draft 2019 Stormwater Management Manual for Western Washington (SWMMWW). 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.

Attached are Seattle's comments for your consideration. The highlights of these comments include:

Formal Draft Phase I NPDES Municipal Stormwater Permit

- S5.C.7 Structural Stormwater Controls. Seattle continues to recommend that Ecology not include a defined level of effort in the 2019-2024 Permit. The S5C7 requirements need further input and development before requiring a defined level of effort because the S5C7 point system and environmental outcomes are currently not sufficiently aligned. Seattle recommends that a facilitated scientific and stakeholder process be undertaken during the 2019 permit term to recommend to Ecology an improved, robust framework for a defined level of effort in future permits.
- S5.C.9 with Appendix 14 WQWebIDDE. The requirement to submit data compatible with Ecology's WQWebIDDE will require extensive data transformation and manual manipulations. For a municipality with hundreds to thousands of investigations per year and its own updated data collection system, this is a significant effort with significant costs, with no value added to our program. Seattle recommends flexibility in the method and substance of data submittal.
- S5.C.5, C.6, C.8 and C.10, with Appendix 1. To provide adequate and legal notice, Ecology must identify any permit requirements in clear and certain terms, not by referring generally to a voluminous manual. Wherever the Permit refers to the SWMMWW, please reinsert the SWMMWW volume and section references that apply, as appear in current and past MS4 Permits.
- S5.C.5 with Appendix 10. Permittees have questions because the 2018 draft, S5.C.5.b.iii (with App. 10), requires Phase I permittees to make some, not all, of the changes Ecology has included in the draft SWMMWW. For example, App. 10 does not list, so S5.C.5.b.ii does not require, new source control BMPs that are in the draft SWMMWW. This differs from the current (2007, 2013) permit structure; Ecology in the past has reviewed the complete set of Phase I program changes (local codes, rules) and approved when equivalent. This allows MS4 municipalities to rely on Phase I programs to meet Permit requirements (S5.C.5.b.ii.). Seattle has provided edits to the Permit to address this concern and better align the permit language with the approach Ecology has chosen.

Draft 2019 Stormwater Management Manual for Western Washington

- Overall.
 - As for the Permit, please state the sections of the SWMMWW used in the MS4 Permit.
 - Seattle has found instances where Ecology's changes made for clarity and consolidation have affected the meaning of the SWMMWW. Seattle has highlighted a number of these changes, but given the size of the manual and the extents of the changes, we ask that Ecology also review for such unintentional changes.
- Volume I-4; UICs. Seattle recommends that Ecology remove the draft UIC guidance, Vol. I-4 (UIC Program Administration & Design Guidance), from the SWMMWW and conduct separate UIC rulemaking to address any UIC program objectives. If not, then Seattle is available to discuss concerns and redrafting for Vol. I-4 to address uncertainty, including revising Vol. I-4 to clarify its limited legal authority regarding MS4 permits, and which limited portions are specific to new UIC wells owned or operated by jurisdictions having MS4 permits.
- Appendix I-D Regional Facilities. This new appendix may have unintended regulatory consequences when the MS4 permit requires a local jurisdiction to adopt the SWMMWW or an equivalent manual. There are new descriptions that should be revised. In addition, the appendix must explain that it is optional guidance for MS4s that regulate development. If there are requirements and limitations for MS4s, they need to be stated in the NPDES Permit, not in the SWMMWW. Seattle recommends that Appendix I-D be reworked so that the intent and optional status are made clear or, in the alternative, that the Appendix should be removed from the SWMMWW.
- III-2.2 Continuous Simulation Models: The draft SWMMWW does not allow the use of MGS Flood, but states that Ecology is working with the vendor to include MGS Flood as well as Western Washington Hydrology Model (WWHM) as an Ecology Approved Continuous Simulation Model. Seattle strongly supports making MGS Flood an approved model. MGS Flood performs computations significantly faster than WWHM and greatly reduces consultant costs during design. Seattle encourages Ecology to engage Permittees and the consulting community, if necessary, so that both MGS Flood and WWHM are approved models.

Thank you for working with Seattle and the other municipal stormwater permittees to develop effective permit requirements to protect our environment. If you have questions about the City of Seattle's attached comments or would like to meet and discuss them with City staff, please contact Kate Rhoads, kate.rhoads@seattle.gov.

Cordially,



John Holmes
Interim Deputy Director
Drainage and Wastewater Line of Business
Seattle Public Utilities

Attachments



Seattle Public Utilities

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City of Seattle - Phase 1 Formal Draft Comments

#	Document	Section	Page	Comment
1	Phase I	Controlling Runoff (WWA)	16-18 of 72	<p>S5.C.5.b.i-iv, with App. 10.</p> <p>Permittees have questions because the 2018 draft, S5.C.5.b.iii (with App. 10), requires Phase I permittees to make some, not all, of the changes Ecology has included in the draft SWMMWW. For example, App. 10 does not list, so S5.C.5.b.ii does not require, new source control BMPs that are in the draft SWMMWW. This differs from the current (2007, 2013) permit structure; Ecology in the past has reviewed the complete set of Phase I program changes (local codes, rules) and approved when equivalent. This allows MS4 municipalities to rely on Phase I programs. (S5.C.5.b.ii.)</p> <p>Thank you for Ecology staff's clarifications during the 10/9 public workshop that</p> <p>(1) Phase I permittee will remain in compliance with the 2019 Permit when the permittee maintains its approved equivalent program and makes only the changes listed in App. 10, and</p> <p>(2) Phase I permittees also have the option to make additional changes toward equivalency with the 2019 SMWWMM beyond those listed in App. 10. Ecology agrees to review for approval the changes that permittee makes, when submitted in the form Ecology describes in App. 10.</p> <p>Because Ecology has chosen this approach, please also alter the Permit to state that Phase I permittees remain in compliance when they follow Ecology's new direction. Text is provided below.</p> <p>It would be unacceptable if Ecology, instead, intends to change the Manual and shift a burden to Phase I permittees to prove AKART and equivalency with the 1000+ page SWMMWW without Ecology review of new Manual provisions.</p> <p>Seattle is available to meet to discuss how to resolve this important point to achieve all goals.</p>

#	Document	Section	Page	Comment
2	Phase I	Controlling Runoff (WWA)	16-18 of 72	<p>Please add text at the end of S5.C5.b.ii as follows: “...Permittees who choose to use the requirements, limitations, and criteria in the Stormwater Management Manual for Western Washington (SWMMWW), or an equivalent manual approved by Ecology, may cite this choice as their sole documentation to meet this requirement. <u>[[ADD]] Permittees listed in Appendix 10, Part 1, may cite as their sole documentation to meet this requirement the equivalent manual approved and listed in Appendix 10, Part 1, plus only those approved revisions to the sections specifically required by S5.C.5.b.iii and listed in Appendix 10, Part 2.</u></p> <p>Please edit S5.C5.b.iii as follows: “The Permittee shall submit draft enforceable requirements, technical standards and manual <u>[[ADD]] excerpts</u> that correspond to updates identified in Appendix 10, Part 2 to Ecology no later than July 1, 2020. <u>[[ADD]] Permittee has the option to submit additional draft enforceable requirements, technical standards and manual excerpts.</u> Ecology will review and provide written response to the Permittee. If Ecology takes longer than 90 days to provide a written response, the required deadline for adoption and effective date will be automatically extended by the number of calendar days that Ecology exceeds a 90-day period for written response.</p> <p>a) Ecology will limit its review to those sections of the program <u>[[ADD]] that the permittee submits to Ecology</u> [[STRIKE listed Appendix 10, Part 2. The Permittee shall provide the section of the 2019-SWMMWW or Appendix 1 and the corresponding section of the proposed program they are seeking equivalency to (]] in the format described in Appendix 10.</p> <p>i) If the permittee proposes a new section not found in the SWMMWW (e.g. a new proposed BMP), then the Permittee shall submit a technical memo describing the rationale, tests, and documentation to demonstrate that the proposal meets AKART and MEP. [[STRIKE Incomplete submittals will not be reviewed.]] “</p> <p>Please edit S5.C5.b.iv as follows: “iv. No later than July 1, 2021, each Permittee shall adopt and make effective a local program that meets the requirements in S5.C.5.b.i through ii, above.</p>
3	Phase I	Controlling Runoff (WWA)	17 of 72	<p>S5.C.5.b.iii(a)(i). As above, Strike “incomplete submittals will not be reviewed”; Ecology has chosen to write a prescriptive MS4 permit, and therefore must (1) make the Permit requirements clear (which “incomplete” is not), and review for approval the materials that Phase I permittees submit to meet permit requirements.</p>
4	Phase I	Controlling Runoff (WWA)	18 of 90	<p>S5.C.5.a.i-vi Include definition of "started construction" from 2013 Permit. It appears to inadvertently have been removed, as Ecology acknowledge during public meeting.</p>
5	Phase I	Controlling Runoff (WWA)	18 of 90	<p>S5.C.5.a.i-vi. For the definition of "started construction", add to permit language further clarification of what is meant by "utility installation". For example, does only installing a gas service line count as "utility installation" and thus mean "started construction"? Perhaps Ecology means: "At a minimum, adequate water, sewer, and drainage utilities necessary to serve the development."</p>

#	Document	Section	Page	Comment
6	Phase I	Comprehensive Stormwater Planning (WWA)	20 of 72	<p>S5.C.6.b.i (new WS planning section). Please state the LID requirement more carefully. Please clarify that, as stated at the 10/11 public workshop, Ecology does not intend for Permittees to engage in a second review and revision process similar to that required in the 2013 Permit. Also, “as needed” places an uncertain obligation on permittees.</p> <p>S5.C.6... b. Low impact development code-related requirements.</p> <p>i. Permittees shall continue to update and revise development-related codes, rules, standards, or other enforceable documents [[ADD]] if permittee determines revision is [[STRIKE-as]] needed to incorporate and require LID principles and LID BMPs. The intent of [[ADD]] any [[STRIKE the review and]] revisions shall be to make LID the preferred and commonly-used approach to site development. [[ADD Any revisions]] [[STRIKEThe local development-related codes, rules, standards, or other enforceable documents]] shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations.</p> <p>(a) Annually, each Permittee shall assess and report any newly identified administrative or regulatory barriers to implementation of LID Principles or LID BMPs and measures to address the barriers since local codes were updated in accordance with the 2013-2019 Permit cycle. The report shall also describe mechanisms adopted to encourage or require implementation of LID Principles or LID BMPs.</p>
7	Phase I	Structural Stormwater Controls (PH I)		<p>Seattle shares with Ecology and other stakeholders a vision of a healthy Puget Sound region. S5.C.7 Structural Stormwater Control is an important element of a Permittee’s SWMP, and Seattle has invested millions of dollars in recent CIP projects and Seattle’s Street Sweeping for Water Quality Program to address high priority stormwater impacts to receiving waters.</p> <p>In concept, Seattle supports the development of a defined level of effort for S5.C.7 Structural Stormwater Controls to document a Permittee’s progress on this requirement. However, Seattle continues to recommend that Ecology not include a defined level of effort in the 2019-2024 Permit. The S5C7 requirements need further input and development prior to having a defined level of effort because the S5C7 point system and environmental outcomes are currently not sufficiently aligned. As a result, stormwater managers may be put in the position where they need to prioritize getting “points” over directing investments for the highest priority environmental outcomes (see roadway example below). That being said, Ecology’s proposed “ramp-up” approach to the required points during the 2019 permit cycle reduces the risk that the point system will significantly drive Phase I priorities during the 2019 permit cycle. However, in future permit cycles (once the ramp-up period is over), the risk is likely to increase significantly.</p>
8	Phase I	Structural Stormwater Controls (PH I)		<p>Regardless of whether a defined level of effort is included in the 2019 permit, Seattle continues to recommend that a facilitated scientific and stakeholder process be undertaken during the 2019 permit term to recommend to Ecology an improved, robust framework for a defined level of effort in future permits.</p> <ul style="list-style-type: none"> · The scientific and stakeholder process would develop recommendations to improve S5.C.7 requirements to better direct millions of dollars of investments to the highest priority environmental outcomes. The process would gather and evaluate local, regional, and national scientific information on the performance and benefits of different structural stormwater control project types in different environmental settings (e.g., urban vs. rural) and gather regional stakeholder input. · This process needs funded technical support and be facilitated because it is a challenging task. <p>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. The technical and facilitation support could follow the highly successful model Ecology used to formulate LID requirements during 2009-2010 and could be funded by SAM Effectiveness Monitoring funds collected under the MS4 Permits.</p>

#	Document	Section	Page	Comment
9	Phase I	Structural Stormwater Controls (PH I)		<p>Seattle’s specific comments on the draft permit are limited to the three changes below because Seattle believes that the framework needs to be looked at holistically by multiple stakeholders, not piecemeal, to avoid unintended consequences that might make the framework less aligned with environmental outcomes.</p> <p>1. For the purpose of calculating Incentive Points, Ecology should provide an alternative to the SWMMWW flow control standard for urban creeks that have had at least 40% total impervious area (TIA) since 1985 by allowing the use of an equivalent Ecology approved manual. Without this, it appears that flow control projects in Seattle’s major creeks would not receive any points because the required flow control standard in Permit Appendix 1 is “match existing” for creeks in 40% TIA areas. In the “Phase I Municipal Stormwater Permit Guidance for Structural Stormwater Control Program: Guidance for Special Condition S5.C.7 and Appendix 12”, the following text should be added to Step 2 of the Flow Control (MR#7) Benefit Ratio and Equivalent Area Process (p. 10). Please add the underlined text as described below:</p> <p>“Use an approved continuous simulation model, to 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) for the full basin.”</p>
10	Phase I	Structural Stormwater Controls (PH I)		<p>2. If Ecology intends to include a defined level of effort in the 2019 Permit, a 4.5-year Performance period is recommended, rather than the proposed 3.5-year Performance Period. Due to annual reporting requirements, the same information will be available to inform next Permit requirement a year prior to Permit reissuance whether a 3.5-year or 4.5-year Performance Period is stipulated. Given that, a 4.5-year Performance Period is more reflective of performance during the 5-year permit period.</p>
11	Phase I	Structural Stormwater Controls (PH I)		<p>3. For 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 as an Appendix. See <u>Puget Soundkeeper Alliance, et al., v. Ecology, et al.</u>, 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)”). It would be insufficient to include Permit requirements, or key details that support the requirements, in a free-standing document or a Fact Sheet.</p>
12	Phase I	Structural Stormwater Controls (PH I)		<p>For Ecology reference, some examples of where the current framework is not robust enough for prioritizing projects (especially once the “ramp-up” period is over) that Seattle is not making specific recommendations on at this time include:</p> <ul style="list-style-type: none"> · 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, 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 same number of points are awarded to a one-acre roadway project that provides enhanced treatment whether the roadway is a rarely travelled roadway in a rural area or an arterial in an industrialized urban area. Although both projects receive the same points, the industrial roadway project most likely has a greater environmental benefit but is also likely to cost significantly more. A stormwater manager faced with limited funding may be forced to prioritize the rarely travelled rural roadway project to get points to meet S5C7 requirements.

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13	Phase I	Source Control Program (WWA)	23 of 72	S5.C.8.b.i. See comment about S5.C.5.b.i-iv. Change to read as follows: “The requirements of this subsection are met by using the source control BMPs in Volume IV of the Stormwater Management Manual for Western Washington, or a functionally equivalent manual approved by Ecology [[ADD]] and listed in Appendix 10, Part 1, with no additional changes required for equivalency.”
14	Phase I	Source Control Program (WWA)		– Source Control Updates - At Phase I Permit S5.C.8.b.i, please include the same footnote about Ecology’s review of revisions, as Ecology has added to S5.C.10.a (O&M), so that S5.C.8.b.i reads as follows: “... Permittees shall update and make effective the ordinance(s), or other enforceable documents, as necessary to meet the requirements of this section no later than August 1, 2021. <u>[INSERT FOOTNOTE NUMBER]</u> AND ADD FOOTNOTE TEXT: “ <u>If Ecology takes longer than 90 days to provide a written response as outlined in S.5.C.5.b.3, the required deadline for adoption and effective date will be automatically extended by the number of calendar days that Ecology exceeds a 90 day period for written response.</u> ”
15	Phase I	Source Control Program (WWA)		At Phase I Permit S5.C.8.a.ii and -b.ii, please correct typo: Substitute “ <u>publicly</u> ” for “ publically. ”
16	Phase I	Source Control Program (WWA)		Please restore clear direction for MS4 permittees about which commercial and industrial “pollutant generating sources” and which BMPs Ecology intends that Phase I Permit requires to be part of local regulation under S5.C.8.b.1. It is difficult to tell because of the way Ecology proposes to rewrite the SWMMWW. • Phase I Permit S.5.C.8.b.1 states, “Operational source control BMPs shall be required for all pollutant generating sources. ...” This does not clearly indicate which are the “pollutant generating sources” for which the Permit requires local jurisdictions to regulate using BMPs, plus which BMPs. (See page 32 of 90 in redline draft Phase I Permit: https://fortress.wa.gov/ecy/ezshare/wq/permits/PhIPermitRedline.pdf) • Currently, the SWMMWW explains applicability of BMPs to commercial and industrial sources -- for example, see 2014 SWMMWW, Vol. IV-1 and IV-2, esp. -2.1 and -2.2, and elsewhere. • But in contrast, draft SWMMWW Vol. IV only states this: “... IV-1 Source Control BMPs Applicable to All Sites through IV-7 Other Source Control BMPs provide BMPs grouped by types of activities that have the potential to produce pollution.” (from Executive Summary of Vol. IV, draft SWMMWW (Source Control) Vol. IV.) Some BMPs are apparently required for “all sites” according to the title of in the 2018 draft SWMMWW at IV-1. • Where is the clear direction like 2014 SWMMWW as to which BMPs a Phase I MS4 must address in local regulation, and for which commercial and industrial sources?
17	Phase I	IDDE		S5.C.9.g Recordkeeping. Seattle recommends the following changes: Each Permittee shall track and maintain records of the activities conducted to meet the requirements of this section [[ADD using either their own system or WQWebIDDE]] . In the Annual Report, each Permittee shall [[ADD use diligent efforts to]] submit data for all of the [[ADD suspected]] illicit discharges, including spills and illicit connections [[ADD ,]] that were found by, reported to, or investigated by the Permittee during the previous calendar year [[ADD ,to]] [[DELETE- The data shall]] include the information specified in Appendix 14 and WQWebIDDE. [[DELETE Each Permittee may either use their own system or WQWebIDDE for recording this data.]] [[ADD The information entered id the best available to the inspector at a point in time.]] Final submittal shall be compatible with and follow the format and data schema described in Appendix 14 and WQWebIDDE.

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18	Phase I	Operations and Maintenance	29 of 7	S5.C.10.a. See comment about S5.C.5.b.i-iv. Change to read as follows: "No later than July 1, 2021 ² each Permittee shall update their maintenance standards as necessary to meet the requirements in this section <u>[[ADD]] and for any manual approved by Ecology and listed in Appendix 10, Part 1, is not required to make additional changes to achieve equivalency.</u>
19	Phase I	Education and Outreach		General Comment: Please select the term 'campaign' or 'program' and use consistently throughout. SPU prefers the term campaign because our E&O programs often consist of multiple campaigns.
20	Phase I	Education and Outreach	45 - 55.	C.11.a.ii. Based on the Ecology staff clarifications provided at the October 3, 2018 STORM conference, please add 'at least one' to the following language: 'Behavior change: To effect behavior change, Permittees shall target <u>at least one</u> of the following audiences and BMPs:'
21	Phase I	Education and Outreach	45 - 55.	C.11.a.ii.(b). Based on the Ecology staff clarifications provided at the October 3, 2018 STORM conference, please add 'at least one' to the following language: 'No later than July 1, 2020, each Permittee shall conduct a new evaluation of the effectiveness of <u>at least one</u> ongoing behavior change program...'
22	Phase I	Monitoring and Assessment		S8.B.3. The requirement to submit SWMP activities tracked and/or maintained should be limited to only data/information S5/9 requires the permittee to keep.
23	Phase I	Appendix 1		Items such as BMPs in Appendix 1 need to reference the SWMMWW as the references are not included within the Permit (e.g. BMP T7.30: Bioretention should be SWMMWW BMP T7.30 Bioretention)
24	Phase I	Appendix 1	13 of 47	Section 2 Definitions. Please clarify whether "light rail" is considered subject to regular use by "motor vehicles". Specifically, the definition of "Vehicular Use" does not include "light rail" in listing "subject to regular vehicular use".
25	Phase I	Appendix 1	13 of 47	Section 2 Definitions. Please clarify whether "heavy rail" is considered subject to regular use by "motor vehicles". Specifically, the definition of "Vehicular Use" does not include "heavy rail" in listing "subject to regular vehicular use".
26	Phase I	Appendix 1	16 of 47	Section 3.1. Figure 1-4.2: Appears to be an error - Change first box from "impervious surface" to "hard surface" to match the definition of "redevelopment" on page 9 of 47.
27	Phase I	Appendix 1	20 of 47	Section 4.1. Per S5.C5.b.i, the Permittee is required to adopt Minimum Requirements, thresholds, and definitions in Appendix 1 that are determined to be equivalent by Ecology. Please specify the chapter and location of site plan guidance, as in previous SWMMWW, to provide the necessary certainty for Permittee requirements. Suggest this addition to the last sentence: "Stormwater Site Plans shall be prepared in accordance the guidance in <u>Chapter XXX of Volume III of the SWMMWW.</u>
28	Phase I	Appendix 1	20 of 47	Section 4.1. In the last sentence of section 4.1, Change sentence to reference specific portion of the the SWMMWW: "Stormwater Site Plans shall be prepared in accordance with <u>[[ADD]Section I-3.4.1 of]</u> the SWMMWW.
29	Phase I	Appendix 1	28-30 of 47	Section 4.5. For Projects that choose to meet the LID Performance Standard, clarify throughout that: Both Flow Control BMP(s) <u>[[ADD] and LID BMP(s) (except for rain gardens)]</u> are allowed to meet the LID Performance Standard.
30	Phase I	Appendix 1		Section 3. It appears that Threshold Discharge Areas are the basis of the thresholds presented in Section 3. Therefore, consider removing the TDA discussions from MR 5, 6, 7, & 8 and instead explain in Section 3 that the basis of thresholds apply to TDA's. Also explain that TDA's apply to Figures 1-4.2 & 1-4.3. Having the TDA discussion repeated multiple times is confusing.
31	Phase I	Appendix 1		Section 2 Definitions. Also consider adding a reference to TDAs in the definition of "Project Site".
32	Phase I	Appendix 1	28-30 of 47	Section 4.5. In multiple locations for conciseness, instead of stating that a project can "Use any Flow Control BMPs desired to achieve the LID Performance Standard", please revert back to the current permit language that states that a project shall "Meet the LID Performance Standard". Then in the "LID Performance Standard" state how the performance standard can be met (i.e. use any "Flow BMP or LID BMP <u>(except for rain gardens)</u> ")

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33	Phase I	Appendix 1	28-30 of 47	Section 4.5. In the LID Performance Standard Section, state that any Flow Control BMP can be used to achieve the standard as well as LID BMPs (except rain gardens). Seattle assumes that other LID BMPs, such as Permeable Pavements and Downspout Full Infiltration can also be used in addition to Flow Control BMPs and Bioretention to meet the LID Performance Standard.
34	Phase I	Appendix 1	29 of 47	Section 4.5. Remove the statement "If the project can't meet the LID Performance Standard it must seek and be granted an exception/variance". Exceptions/Variations apply to more than MR#5. Additionally, the statement appears to obligate the Permittee to grant an exception. If the project proponent does not want to reserve a space for meeting the LID Performance Standard, but it is technically feasible, is that sufficient grounds for the Permittee to grant an exception/variance? Rewrite to avoid appearance that Ecology is directing local jurisdictions to issue an exception/variance. Either be silent about exceptions/variances in this section or rewrite as follows: " <u>Projects must either meet the LID Performance Standard, or seek and obtain an exception/variance.</u> "
35	Phase I	Appendix 1	35 of 47	Section 4.6. The new title "Runoff Treatment Performance Goal Thresholds" appears incorrect as this section is instead describing when certain treatment types are required (e.g. Oil Control). The "Performance Goals" are instead described within the SWMMWW. Consider changing the title of this section to: "Runoff Treatment Thresholds".
36	Phase I	Appendix 1	36 of 47	Section 4.6. The new sentence at the beginning of this section is ambiguous and appears to be adding new definitions. For example, what is meant by "sensitive to phosphorus" and "are being managed to control phosphorus". Please delete this new sentence.
37	Phase I	Appendix 1	37 of 47	Section 4.6. How should a Permittee determine if project site is a "Commercial project site"? For example, are public parks considered commercial?
38	Phase I	Appendix 1	28 of 47	Section 4.5: – Please list the Competing Needs Criteria in the Permit, rather than referring to SWMMWW as the section is currently drafted, just before Table 1-10.2. If Ecology refers to SWMMWW, include (as before) the specific section and date of version, to provide the necessary certainty to permittees as to which requirements apply.
39	Phase I	Appendix 1	35 of 47	Section 4.6: The qualifier, "Except as provided below,..." at the beginning of this section is confusing. Which exception is ECY referring to? It seems to be clearer to just state: "The Permittee must require Runoff Treatment BMPs in accordance with the following thresholds, standards, and requirements..."
40	Phase I	Appendix 1	40 of 47	Section 4.7: The qualifier, "Except as provided below,..." at the beginning of this section is confusing. Which exception is ECY referring to? It seems to be clearer to just state: "The Permittee must require Flow Control BMPs in accordance with the following thresholds, standards, and requirements..."
41	Phase I	Appendix 1	42 of 47	Provide SWMMWW volume and chapter location for figure "Basins with 40% Total Impervious Area as of 1985," to provide necessary certainty to Permittees."
42	Phase I	Appendix 1	various	As in previous versions, provide specific reference to SWMMWW, for example to read: "See <u>Volume XXX, Section XXX of the SWMMWW</u> for detail on how an Alternative Flow Control Performance Standard may be established." And "Flow Control BMPs shall be selected, designed, and maintained in accordance with <u>Volume XXX, Section XXX ... of the SWMMWW</u> or an approved equivalent."
43	Phase I	Appendix 1	45 of 47	Restore previous language to match common usage and a later portion of text; replace : "...a written finding of fact that documents..." with " <u>...written findings of fact that document...</u> "

#	Document	Section	Page	Comment
44		Appendix 1	various	<p>To provide adequate and legal notice, Ecology must identify any permit requirements in clear and certain terms, not by referring generally to a 1000+ page manual. Wherever the Permit refers to the SWMMWW, please reinsert the SWMMWW volume and section references that apply, as appears in current and past MS4 Permits. In App. 1, we appreciate several clear reference to specific BMPs, but in many other places, please specify as is true in the current Phase I Permit App. 1:</p> <ul style="list-style-type: none"> •Section 2 – Definitions - Reinsert the proper volume and section at the end of “Maintenance.” •Section 4.1, MR #1 - Reinsert the proper volume and section at the end regarding stormwater site plans. •Section 4.2. MR #2, under “Project Thresholds” – Reinsert the proper volume and section for Sediment and Erosion Control BMPs in Construction SWPPP. •Section 4.3, MR #3 - Reinsert the proper volume and section for Source Control BMPs. •Section 4.5, MR #5. Under “The List Approach” - Reinsert the proper volume and section for Competing Needs Criteria. •Section 4.6, MR #6, under “Water Quality Design Volume”– Insert the proper volume and section for Single Event Hydrograph Method. •Section 4.6, MR #6, under “Runoff Treatment BMP Selection, Design, and Maintenance” - Reinsert the proper volumes and sections in three places. •Section 4.7, MR #7 - Reinsert the proper SWMMWW location for the "Flow Control Exempt Receiving Waters" Appendix (in two places) and the figure "Basins with 40% Total Impervious Areas as of 1985". •Section 4.7, MR #7 – Insert the proper volumes and sections for establishment of the Alternative Flow Control Performance Standard and for selection, design, and maintenance of flow control BMPs. •Section 4.8, MR #8 – Insert the proper SWMMWW location for “Guidelines for Wetlands When Managing Stormwater Appendix” (in two places). •Section 7 – Insert the property SWMMWW location for basin plan examples.
45	Phase I	Appendix 1	27 of 47	<p>Section 4.3. Per S5.C5.b.i, the Permittee is required to adopt Minimum Requirements, thresholds, and definitions in Appendix 1 that are determined to be equivalent by Ecology. In Appendix 1, Ecology should explicitly call out which sections of the SWMMWW that must be adopted for equivalency.</p> <p>For example, Section 4.3 Minimum Requirement #3, should specify which portion of the SWMMWW shall be adopted for equivalency (i.e. Volume IV).</p>
46	Phase I	Appendix 1		In general, open-ended references to the SWMMWW should be minimized or eliminated because they add uncertainty to the Permit.
47	Phase I	Appendix 1	28 or 47	Section 4.5. For section "Projects that Trigger Only Minimum Requirements #1 - #5", in first sentence insert "and" after exempt, to read "Projects that are not Flow Control exempt <u>and</u> that..."
48	Phase I	Appendix 1	7 of 47	Section 2 Definitions: Consider adding a definition for "Project" that means either "New Development" or "Redevelopment". For example, in Figure 1-4.2, is "Project" interchangeable with "New Development"?
49	Phase I	Appendix 10	6 of 7	As noted in S5.C.5.b.iii(a)(i) comment, delete: [[STRIKE “Changes submitted without a technical memo will not be reviewed.”]]
50	Phase I	Appendix 13 (WWA)	Table 1	There is a new Seattle-Owned basin on the West Side of the waterway. The name is Herrings House, Separated Stormwater Drainage Basin Area is 6.07 Acres, the Outfall Diameter is 30 inches, Effectiveness Monitoring Location is null, Sampling to Fill Data Gap is Yes
51	Phase I	Appendix 13 (WWA)	Table 1 & 2	1 st Ave. S (east) outfall that is currently listed in Table 1 should be ‘outfall owned or installed by others’ [WSDOT], thus moved from Table 1 to Table 2.

#	Document	Section	Page	Comment
52	Phase I	Appendix 14 (PH I)		<p>Seattle recommends the following changes:</p> <p>This is the complete list of information that [[DELETE a#]] Permittees are required to use diligent efforts to report for each [[DELETE #DDE incident#]] <u>[[ADD suspected illicit discharge, including spills and illicit connections, that were]]</u> found <u>[[ADD by]]</u>, reported to, or investigated by the Permittee. Each Permittee may either use their own system or the WQWebIDDE form for recording this data. If using your own tracking system, this information must be provided in an electronic format that follows the data schema provided at the end of this document and is easily transferred to a database. Ecology prefers a zipped .xml. An excel spreadsheet or space- or tab-delimited file that follows the data schema is acceptable.</p> <p>[[DELETE A complete report will]] <u>[[ADD Each permittee is to use diligent efforts to]]</u> include a separate entry (even if left blank) for every line below and [[DELETE must]] <u>[[ADD to]]</u> use the precise verbiage and spelling below. For all incidents where the answer to #7 is no, #8 is required but #9-15 are not required. Each field that ends in a colon (":") is followed by a text answer. All dates are in MM/DD/YYYY format.</p>
53	Phase I	Appendix 14 (PH I)		<p>Overall Comment – The requirement to translate the data detailing over 1,000 IDDE Investigations that Seattle Public Utilities (SPU) performs annually is a significant task. To adapt the data being collected into the specific terms and schema being proposed will require the creation of a translation tool as well as potentially requiring changes to the newly created MS Dynamics database that was put into service in July 2018 after nearly 2 years of development. The work required will need to be handled as an IT Project and will require project planning, development, and testing time.</p>
54	Phase I	Appendix 14 (PH I)		<p>WQWebIDDE Schedule</p> <p>It is not appropriate to begin an IT project based on draft permit requirements so the earliest reasonable time to be initiated would be August 2019. It is very likely that developing and executing this work would not happen in time to perform the 2019 Annual Electronic Submission (March 2020). The current SPU database can export data but it would not follow the schema nor use the specific terms so any submission prior to project completion would have limited utility; approximately 20% to 40% applicability.</p> <p>Necessary work and modifications to the existing database necessitates first submission required under the new system would be scheduled for the report that covers the 2020 reporting year.</p>
55	Phase I	Appendix 14 (PH I)		<p>SPU's IDDE data collection system has been refined to collect the most applicable data for Seattle incidents. Data translated into the WQWebIDDE would be of reduced detail.</p>
56	Phase I	Appendix 14 (PH I)	1	<p>#6 - The "Transferred to another party?" choice should allow for more than one party since it is possible to transfer an investigation to two or more agencies.</p>
57	Phase I	Appendix 14 (PH I)	1	<p>On #6 the "Transferred to another party" question and the "Referred to other agency or department" field found in #14 are similar. Please provide clarification for applicable uses of these two fields.</p>
58	Phase I	Appendix 14 (PH I)	1	<p>#7 - For the "Estimated Volume" field, please break up the choices into groupings such as <5, 5-50, >50-500, >500-2,000, and >2,000 (or some other sensible number of choices)</p>
59	Phase I	Appendix 14 (PH I)	3	<p>#8 - What is intended to be recorded in the category of "Other MS4"? Please provide clarification for applicable uses of this field.</p>
60	Phase I	Appendix 14 (PH I)	3	<p>#10 - Seattle uses a single field for street addresses or intersection type addresses. Will submitting an intersection or narrative address into the "Street" field result in a data miss-match? Recommend <u>adjusting the "Street" field to receive a variety of location descriptions.</u></p>
61	Phase I	Appendix 14 (PH I)	3	<p>#11 - Is "Unconfirmed" the same as "None found"? Please provide clarification for applicable uses of these two choices.</p>
62	Phase I	Appendix 14 (PH I)	3	<p>#11 - Why are there choices like "Unconfirmed" and "None found" if you exit the process at #7 when you pick "No problem found"?</p>
63	Phase I	Appendix 14 (PH I)	5	<p>#12 - Why is "Allowable discharge" a required reporting category? Please provide clarification for applicable uses of this field.</p>

#	Document	Section	Page	Comment
64	Phase I	Appendix 14 (PH I)	6	#12 - The choice "Broken or clogged water or sewer line" should be changed into two choices since water line issues are different than sewer ones.
65	Phase I	Appendix 14 (PH I)	8	#15 - These can be extremely lengthy and not always suited to a plain text field. Please provide additional clarification regarding how this field is intended to be used.
66	Phase I	Appendix 14 (PH I)	8	#15 - Please provide additional clarification regarding unresolved/ongoing inspections. Seattle requests that entries not be required to be updated beyond one month of intake time and be left as a new choice called "Ongoing" in #14 for those with extended enforcement periods. A requirement to perpetually update long running enforcement cases is a burden.
67	Phase I	N/A		FACT SHEET Fact Sheet overall: Concerned that meaning has been lost for the Phase I Permit by combining the two fact sheets into one. At minimum, when a FS section relates only to Phase II, please revise the Fact Sheet to state that in the Permit section title and include the Phase-II only Section number. The comments have not indicated each instance, but for example: 6.1.3, 6.1.4, 6.1.5, and 6.1.6 all appear to relate to Phase II only and all refer S1 Permit sections that do not match the text in the Phase I Permit.
68	Phase I	N/A		FACT SHEET p. 29 at 4.1: Restore parts of the 2011 Fact Sheet language for accuracy, to read: "In Washington State, a wide range of industrial facilities listed at 40 CFR 122.26(b)(14) must obtain [ADD NPDES permits from Ecology, in most cases] coverage under Ecology's Industrial Stormwater General Permit, [DELETE which authorizes] [ADD to authorize] discharges to surface waters or to MS4s that discharge to surface waters...."
69	Phase I	N/A		FACT SHEET. p. 33 at 6.1.2: Please consider restoring most of the Phase I Permit 2011 FS text about coverage and permittees, which is accurate and complete and contains important information. If not, then it is necessary to add "may" to read: "The areas covered by the permit [ADD may] include the entire incorporated area of a city...." Reason: Inaccurate. Permit coverage is only for "discharges from" the MS4, not direct discharges or combined sewer areas.
70	Phase I	N/A		FACT SHEET p. 34 at 6.1.3 – Delete "Phase I and" in second full paragraph, to read, "For [DELETE-Phase I and] Phase II counties, the Permits cover the urbanized area, or census-defined urban area, that extends...." Reason: Inaccurate. The maximum MS4 area for Phase I counties is based on jurisdictional boundaries, not census-defined urban status like Phase IIs.

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
1	(General Comment)	Ecology must give clear notice to permittees of what parts of the SWMMWW are required by the Permit. (See similar comment for the Permit and its Appendix 1.) Please accurately summarize how the manual is used in the MS4 Permit.	Seattle
2	I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	In the "Additional Guidance for Element 1", the guidance states that "Plastic, metal, or fabric fence may be used to mark the clearing limits". Add language that allows additional options, such as walls or buildings, as long as they provide an equivalent level of protection.	Seattle
3	I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	In the "Additional Guidance for Element 7", clarify what "adequate treatment" means.	Seattle
4	I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	Element 10, Control Dewatering, does not mention the tanks (e.g. Baker tanks) that are commonly used for temporary storage and sedimentation. They should be included in the list of "Other dewatering treatment or disposal options may include:". Also, under the third bullet, add "Temporary storage and onsite treatment may be required for small urban lots, or where infiltration is infeasible".	Seattle
5	I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	Element 10, Control Dewatering. Add a bullet in the Additional Guidance section that addresses discharges from contaminated sites (e.g. Guidance for Remediation of Petroleum Contaminated Sites).	Seattle
6	I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	Element 4: What amount of vegetative cover is needed for full stabilization? How established should the vegetation be?	Seattle
7	I-3.4.3 MR3: Source Control of Pollution	Move section "Identifying Source Control Strategies in a Basin Plan. It is confusing to have Basin Plan verbiage in multiple locations in the SWMMWW.	Seattle
8	I-3.4.5 MR5: On-Site Stormwater Management	In Competing Needs Criteria, revert to the original text, to eliminate unintentional changes in meaning that occurred during Ecology's technical edit. Sentence must read, like 2014 updated Manual: " <u>Where a LID requirement has been found to be in conflict with special zoning district design criteria adopted and being implemented pursuant to a community planning process, the existing local codes may supersede or reduce the LID requirement.</u> "	Seattle
9	I-3.4.5 MR5: On-Site Stormwater Management	Reconstruct and insert the original list of laws because the link in the draft is broken: "Historic Preservation Laws and Archaeology Laws as listed at http://www.dahp.wa.gov/learn-and-research/preservation-laws... " Including website links in the MS4 Permits fails to give permittees the necessary certainty as to permit requirements.	Seattle
10	I-3.4.6 MR6: Runoff Treatment	Contrary to the MR6 box in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: " <i>Projects shall employ Runoff Treatment BMPs in accordance with the following thresholds, standards, and requirements to remove pollutants from stormwater runoff.</i> "	Seattle
11	I-3.4.6 MR6: Runoff Treatment	Contrary to the MR6 box in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: " <i>Size Runoff Treatment BMPs to treat the Water Quality Design Flow Rater or Water Quality Design Storm Volume....</i> "	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
12	I-3.4.6 MR6: Runoff Treatment	Move section "Revising MR6 through Basin Plan" to Appendix I-B: Basin Plans. It is confusing to have Basin Plan verbiage in multiple locations in the SWMMWW.	Seattle
13	I-3.4.7 MR7: Flow Control	Contrary to the MR7 box in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: <i>"Projects shall employ Flow Control BMPs in accordance with the following thresholds, standards, and requirements to reduce the impacts of stormwater runoff from hard surfaces and land cover conversions."</i>	Seattle
14	I-3.4.7 MR7: Flow Control	Contrary to the MR7 box in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: <i>"Flow Control BMPs shall be selected, designed, and maintained in accordance with this manual"</i>	Seattle
15	I-3.4.7 MR7: Flow Control	Move section "Revising MR7 through Basin Plan" to Appendix I-B: Basin Plans. It is confusing to have Basin Plan verbiage in multiple locations in the SWMMWW.	Seattle
16	I-3.6.1 Adjustments to the MRs	Contrary to the box under Section I-3.6.1 in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: <i>"Adjustments to the Minimum Requirements may be granted prior to permit approval...drainage manual admistrator..."</i> "Drainage Manual Administrator" is not a Permit term.	Seattle
17	I-3.6.2 Exceptions/Variences to the MRs	Contrary to the box under Section I-3.6.2 in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: <i>"Exceptiona/variances (exceptions) to the Minimum Requirements...drainage manual administrator..."</i> . "Drainage Manual Administrator" is not a Permit term.	Seattle
18	BMP D.1: Detention Ponds	The detention pond section should be shortened and cross referenced to wet ponds for all similar criteria and constraints - Many of the basic siting issues, access issues, safety issues and empoundment are similar across the wetpool and detention pond BMPs. It is not helpful to have such differing descriptions or requirements for similar features, including dam safty references.	Seattle
19	BMP D.1: Detention Ponds	Emergency Overflow Spillway Capacity should be moved to the hydraulic structures section since it is common to multiple BMPS.	Seattle
20	BMP T5.13: Post-Construction Soil Quality and Depth	Clarify in the Runoff Model Representation if vegetated areas that are protected and do not require amendment can also be modeled as "pasture".	Seattle
21	BMP T5.15: Permeable Pavements	Runoff Model Representation: WWHM 2012 has a Permeable Pavement element, but the Runoff Model Representation directs the use of the Gravel Trench Beds. Clarify whether the use of these elements is interchangeable or if using the WWHM Permeable Pavement element is not permitted.	Seattle
22	BMP T5.30: Full Dispersion	Request additional guidance/requirements for pathways in parks to acheive Full Dispersion. Pathways in parks do not fit into the "Residential" or the "Roadway" categories included in this BMP but are some of the most likely surfaces to be dispersed. How much flowpath across parks lawn would be required to fully disperse a pathway/walkway?	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
23	BMP T7.30: Bioretention	Mulch layer - this section specifies that coarse mulch shall be used. Seattle has found that coarse mulch as too much plastic and now specifies medium compost	Seattle
24	BMP T7.30: Bioretention	Modeling - Seattle has many cells with side slopes of 2.5:1, which is steeper than the minimum 3:1 side slope that ECY states can be modeled allowing side slope infiltration. Seattle sees significant infiltration through 2.5:1 side slopes and believes modeling of infiltration through side slopes at 2.5:1 should be allowed.	Seattle
25	I-1.5 Types of Best Management Practices (BMPs) for Stormwater Management	The 2nd to last paragraph implies a stepped requirement " and contains direction that should be in a permit, and not be in the SWMMWW. Different permits will have different requirements. Please delete sentence: "If it is found that...beneficial uses are still impaired..., additional controls may be required."	Seattle
26	I-1.5 Types of Best Management Practices (BMPs) for Stormwater Management	Consider defining LID BMP in the list of types. Other BMP types are somewhat self-explanatory; it is not clear if LID is an undefined acronym.	Seattle
27	I-1.5 Types of Best Management Practices (BMPs) for Stormwater Management	The new "Hydroperiod Protection Guidelines for Wetlands" should be included in the list of quantifiable methods used to prevent adverse impacts (in addition to Flow Control, Runoff Treatment, and Source Control)	Seattle
28	I-2.14 Underground Injection Control (UIC) Program	Bioretention with collection underdrains are not considered UICs by the Washington Administrative Code, so they must not be considered UICs here or elsewhere in the SWMMWW. In definition, please delete the text that is not in the WAC 173-218-030 definition of UIC: "... which includes perforated pipes, drain tiles or other similar mechanisms." Please insert after the list, all of WAC 173-218-050, or at minimum the following: "The following are not considered UIC wells and are not regulated under this chapter. ...(5) Storm drain components that contain perforated pipes, drain tiles or other similar mechanisms designed and intended to convey water directly or indirectly to a surface water body." Bioretention with an underdrain meets WAC 173-218-050(5) and is collecting water out of the cell after it has been treated, thus reducing the water that enters groundwater. The SWMMWW text appears to be an error; if intentional by Ecology, this would be a significant change contrary to state rule and would place an unnecessary burden on the applicant and discourage use of an important LID BMP.	Seattle
29	I-2.15 Other Requirements	Remove first bullet under federal SPCC regulations. SPCC regulations no longer have the 660 gallon threshold.	Seattle
30	I-2.3 The Action Agenda for Puget Sound	Determine Organics and Bacterial Reductions by Treatment Best Management Practices bullet, possible typo: polycyclic aromatic hydrocarbons instead of "polyaromatic"	Seattle
31	I-2.4 Phase I and Western Washington Phase II Municipal Stormwater Permits	Suggest a correction to the statement of law: "Ecology is a delegate authority of the NPDES permit program by the Environmental Protection Agency (EPA), ..." should be "Ecology has authority delegated under the NPDES permit program by the Environmental Protection Agency (EPA), ..."	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
32	I-2.6 Industrial Stormwater Permits	Suggest a correction to the statement of law: "Ecology is a delegate authority of the NPDES permit program by the Environmental Protection Agency (EPA), ..." should be "Ecology has authority delegated under the NPDES permit program by the Environmental Protection Agency (EPA), ..."	Seattle
33	I-2.7 Construction Stormwater General Permit	Suggest a correction to the statement of law: "Ecology is a delegate authority of the NPDES permit program by the Environmental Protection Agency (EPA), ..." should be "Ecology has authority delegated under the NPDES permit program by the Environmental Protection Agency (EPA), ..."	Seattle
34	I-3.1 Introduction to the Minimum Requirements	Consider adding TDA discussion to this section and/or reference TDAs in this section instead of repeating multiple times in MRs. Similar comment for Appendix 1 to Permit.	Seattle
35	I-3.3 Applicability of the Minimum Requirements	Step 1 to determine whether discharge is to a UIC well is out of order since that determination cannot usually be made until after TDA delineation and BMP selection.	Seattle
36	I-3.3 Applicability of the Minimum Requirements	Under Item 3 (Delineate the Threshold Discharge Areas) add language referring to the definition of Threshold Discharge Area in the Glossary. The definition includes a Figure with examples, which is very helpful.	Seattle
37	I-3.3 Applicability of the Minimum Requirements	Language has been added that appears to state that flow control, runoff treatment, and wetlands protection are only required if the thresholds within a TDA within the project site are exceeded. Is this correct? In the previous SWMMWW, if the thresholds for flow control and runoff treatment are exceeded for the entire site, then the requirements apply to the entire site. Figures 1-4.1 and 104.2 should be revised to match the TDA language, as they appear to conflict with the added TDA language.	Seattle
38	I-4.11 Deep UIC Wells	This section introduces a new category of UIC Wells separate from what is covered under the UIC program and poorly defines what qualifies as a deep UIC. In addition, it appears to create new requirements that are much more substantial than what is required for a typical UIC well. For example, it requires submittal of a Landscape Management Plan to ECY. This seems like an undue burden when there are already requirements for stabilizing the site and providing water quality treatment. Additional requirements should not be added without proper rulemaking by Ecology.	Seattle
39	I-4.13 Classification of Vadose Zone Treatment Capacity	The paragraph following Table 1-4.3 states "Designers may use subsurface infiltration (UIC wells) to provide flow control of excess stormwater runoff for flows greater than the water quality design storm where pollutant concentrations...". This statement refers to excess stormwater runoff, which is different from how UICs are stated to be allowed in section 1-4.1	Seattle
40	I-4.6 Siting and Design of New UIC Wells	The section within Minimum Sizing Requirements for Rule-Authorization of New UIC Wells that describes how UIC wells can be used to provide Flow Control is unclear and seems to be missing some connecting and clarifying words	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
41	I-C.2 Levels of Wetland Protection	Under "Level 1 Protection", introducing "Special Characteristics" without a minimum size (i.e. 1 acre) is problematic. The WA State Wetland Rating System already accounts for Special Characteristics when categorizing wetlands. Therefore, Item #1 of Level 1 Protection should be removed, and instead the first items should be: "1. A wetland rating of Category I or II. These wetlands provide a high level of many functions [[ADD] and/or have special characteristics]." See also the separate email Seattle sent to Ecology on 10/25/2018 re this concern and with suggested changes.	Seattle
42	I-C.2 Levels of Wetland Protection	It appears that the intent of Level 3 Protection is to replace the 2014 Guide Sheet 2. As Seattle interprets, that guide sheet is used to determine if a wetland can be included as a treatment or FC facility, which is a different question than what level of Hydroperiod or Pollutant Protection is necessary when not including a facility within the wetland. Therefore, the criteria for designating the Level Protection criteria should be separate from determining whether a wetland can also be used as a facility. One of the concerns re the Level 3 Protection is determining whether or not there is a breeding population of native amphibian species even if the wetland is excluded from being used as a part of a treatment or FC facility. See also the separate email Seattle sent to Ecology on 10/25/2018 re this concern and with suggested changes.	Seattle
43	I-C.2 Levels of Wetland Protection	Seattle has concerns about introducing thresholds outside of the Wetland Rating System, including determining Level 1 protection as it relates to Special Characteristics regardless of the size of the special characteristic (e.g. bog wetland at 100 sf). Seattle believes that the Wetland Rating system adequately captures Special Characteristics by assigning a minimum size for a special characteristic. See also the separate email Seattle sent to Ecology on 10/25/2018 re this concern and with suggested changes.	Seattle
44	I-C.3 General Wetland Protection Guidelines	Item 4: consider changing "exotic plant species" to "native and invasive plant and animal species". The term 'exotic' is inconsistent with currently used terminology; also, the draft language should include both plants and animals.	Seattle
45	I-C.5 Hydroperiod Protection Guidelines for Wetlands	Vegetation Richness Criteria Group (Veg), Item 6: not clear. Consider changing "Alterations to watershed and wetland hydrology that may cause perennial wetlands to become vernal post-project must be avoided" to "Alterations to watershed and wetland hydrology that may cause perennially wet wetlands to become vernal moist post-project."	Seattle
46	I-C.5 Hydroperiod Protection Guidelines for Wetlands	Making hydroperiod requirements that include year-long measurement of the Water Level Fluctuation for a wetland located offsite from proposed development is problematic for applicants (e.g. offsite costly survey/monitoring, access to multiple other private properties). It is understood that the 2014 guidelines can still be used, but Seattle is concerned that the proposed requirements in the current draft may be the only available standard in the future. Please reconsider this requirement for wetland's that are not located within the project site or scale of project discharging to a given wetland.	Seattle
47	I-C.5 Hydroperiod Protection Guidelines for Wetlands	Seattle has concerns re the complexity of the proposed modeling requirements for wetlands and is unsure of how to perform in both WWHM and MGS Flood.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
48	I-C.7 Wetland Protection Definitions	Buffers: Consider using a definition similar to Ecology’s definition (Pub 92-10): those areas that surround a wetland or watercourse and reduce adverse impacts to the ecosystem functions and values from adjacent development	Seattle
49	I-C.7 Wetland Protection Definitions	Estuarine Wetlands: Consider using a more standard definition, along the lines of Cowardin: tidal wetlands usually semi-enclosed by land but have open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. Normal salinities range between 0.5 and 30 ppt.	Seattle
50	I-C.7 Wetland Protection Definitions	Invasive Species: In the US, practitioners typically use this guidance provided by EO 13112: a non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human health. Do not include native species in this definition.	Seattle
51	I-C.7 Wetland Protection Definitions	<p>Rare, threatened, or endangered species: Consider modifying as follows to include “protected”, which is used in this Appendix. For example:</p> <p>Rare, threatened, endangered, or protected species</p> <p>and</p> <p>Plant or animal species that are relatively uncommon regionally, are nearing endangered status, or whose existence is in immediate jeopardy and is usually restricted to highly specific habitats. Threatened and endangered species are officially listed and protected by federal and state authorities, whereas rare species are species of concern that may fit the above definitions but are not officially listed as such.</p>	Seattle
52	I-C.7 Wetland Protection Definitions	Redevelopment: Delete this definition as it conflicts with SWMMWW definition	Seattle
53	I-C.7 Wetland Protection Definitions	Vernal Wetland: Unclear; this is not actually a working term. Is the actual intent “Vernal Pool Wetland” or “Vernally Wet Wetland” or “Vernally Moist Wetland”?	Seattle
54	I-D.1 Introduction to Regional Facilities	Potential unintended consequences of new and overly broad description: "A regional facility is a stormwater BMP that provides Runoff Treatment and/or Flow Control to more than one property." It would be very unusual if Ecology intended, for example, a rain garden that drains two properties to be considered a regional facility and subject to guidance (potentially requirements?) included in appendix. Recommend deleting sentence.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
55	I-D.5 Sizing Regional Facilities	<p>Please clarify that this section is guidance, not a must do, and provide flexibility for Runoff Treatment facilities. Recommended text change: “If development is proposed within the contributing area of an existing regional facility, but the regional facility was not originally sized to serve this proposed development, the following guidance may be used to expand the <u>a regional facility providing Flow Control benefits</u> to serve the additional development. <u>Ecology provides guidance for one method for expanding an existing regional facility providing Flow Control; local jurisdictions may choose to use an alternate method, and they are responsible to document how minimum requirements are met. Although allowed, Ecology does not provide guidance on how to expand an existing regional facility providing Runoff Treatment to serve additional development; local jurisdictions would develop methodology and document how Runoff Treatment requirements are met. This guidance only applies to regional facilities providing Flow Control benefits.</u>”</p>	Seattle
56	I-D.6 Regional Facility Area Transfers	<p>Delete the following sentence “For an in-basin transfer, the regional facility must discharge to the same point (or upstream) in the receiving water as the project that transferred the on-site benefit to it.” This is a new qualifier for in-basin transfers and is not found in other Ecology permit or guidance documents. The definition found in the Glossary of the Stormwater Control Program: Out of Basin (2nd draft) is different: “In-Basin Transfer: Construction of, or purchase of capacity credit in, a facility that discharges into the same receiving water as the project site.”</p> <p>By limiting the discharge point of an in-basin transfer, Ecology would create a situation in which there is no regional facility pathway for an in-basin transfer that discharges somewhere other than the same point or upstream. If out of basin transfers can be done under certain circumstances, there should be pathways for all potential in-basin transfers.</p>	Seattle
57	I-D.6 Regional Facility Area Transfers	<p>Please revise to clarify Ecology’s intent, which is apparently to provide guidance and not limitations or requirements for MS4s: “Municipalities may allow-in basin area transfers. that comply with the guidance in this section. Though this <u>This guidance is optional and is not expressly incorporated into the Phase I and Western Washington Phase II Municipal stormwater permits. Permittees may, however, infer Ecology’s acceptance of programs that follow the guidance. Alternatives may also be appropriate.</u>”</p>	Seattle
58	I-D.6 Regional Facility Area Transfers	<p>In the “Types of Regional and Equivalent Facilities for Area Transfers” section, add the following text: “The Flow Control facility types include, <u>but are not limited to:</u>”</p>	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
59	I-D.6 Regional Facility Area Transfers	In the “Determining Regional Facility Capacity for Area Transfers” section, please modify the text to clarify that guidance is for Flow Control only and is only guidance. Recommended change: <u>“For Flow Control area transfers, jurisdictions may use the following guidance to determine the net capacity available in a regional facility that is included in a Flow Control area transfer program. Ecology provides guidance for one method to determine the net capacity available in a regional facility; local jurisdictions may choose to use an alternate method, but they are responsible to document how minimum requirements are met. Although allowed, Ecology does not provide guidance on how to determine the net capacity available in a regional facility that is included in a Runoff Treatment area transfer program; local jurisdictions would develop methodology and how requirements are met.”</u>	Seattle
60	I-D.6 Regional Facility Area Transfers	In the “Determining Regional Facility Capacity for Area Transfers” section, please delete the following sentence: “For tracking purposes, the capacity of a regional facility is calculated and documented in terms of area.” This may be done but is not required. Jurisdictions are allowed to develop their own tracking method which may be different from guidance. Tracking may be done in terms of area or may use a different metric. One example where a different metric might be appropriate is for Runoff Treatment facilities that have different source areas contributing.	Seattle
61	I-D.6 Regional Facility Area Transfers	In the “Determining Net Capacity Available for Area Transfers in Regional Infiltration Basin/Detention Pond Type Facility” section, please change text to clarify that procedure is one method and is an example rather than a required method: “The procedure detailed below describes <u>one example of method</u> how to calculate the available capacity of a regional infiltration basin/detention pond type facility for area transfers”.	Seattle
62	I-D.6 Regional Facility Area Transfers	Please change the “Tracking Regional Facility Area Transfers” section to indicate that it describes one possible method to track regional facilities versus current “must prepare and maintain” which is only applicable to Flow Control facilities. Many stated tracking requirements do not make sense for a regional Runoff Treatment facility. (e.g., “The Flow Control standard used to determine the regional facility’s capacity.”) A recommended change, in addition to others to the same effect: <u>“The municipality must prepare and maintain a tracking table that documents [ECY to insert high level description of information Ecology needs to see, for Flow Control facilities and for Runoff Treatment facilities] as described below for any regional facility that serves areas outside of its contributing area using in-basin and or out-of-basin area transfers. Presented below is an example of how regional facility tracking can be done for a Flow Control facility.”</u>	Seattle

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63	I-D.6 Regional Facility Area Transfers	<p>Per above comment, recommend changes:</p> <ul style="list-style-type: none"> •Change subsection title to: “Regional <u>Flow Control</u> Facility Tracking <u>Example</u>”. •Change first sentence to “An example of the type of information that <u>a The municipality must prepare and maintain a tracking table for each Flow Control regional facility may contain includes:</u>” •Change sentence to “The summary sheet will document the location <u>and the capacity used in the regional facility. For flow control facilities, this may be the acreage amount of each land cover types that was used by each project. See Table I-D.3 for an example. The with the total for each type of land cover in Table I-D.3 must matching the Used Capacity column in Table I-D.2. “</u> 	Seattle
64	III-1.1 Choosing Your Source Control BMPs	<p>Section: How to Determine Which Source Control BMPs are appropriate for the Site: Note that not all Source Control BMPs in Volume IV use the categorization of "operational" or "structural", and "applicable" or "recommended". Please revise text in Volume III to address, or have all Volume IV BMPs include these categorizations.</p>	Seattle
65	III-1.1 Choosing Your Source Control BMPs	<p>Section: How to Determine Which Source Control BMPs are appropriate for the Site: At second bullet of step #2, the 2nd sentence implies that Source Control BMPs are only applicable when listed in "Appendix IV-A: Urban Land Uses..." if you take the converse of this sentence. It should be clear in the Permit and in the SWMMWW when Source Control BMPs are required. As written in Volume I, it appears that Source Control BMPs are only required for projects with greater than 2,000 sf of new or replaced impervious surfaces or 7,000 sf of land disturbing activity.</p>	Seattle
66	III-1.1 Choosing Your Source Control BMPs	<p>Section: How to Determine Which Source Control BMPs are appropriate for the Site: In step #3, it states that the reader shall interpret the term "applicable" as meaning "mandatory" or "required", but many of the Source Control BMPs in Volume IV use such language as: "if possible", "try", "avoid or minimize", "where feasible or practicable", "try to use" - this type of language should be avoided in a mandatory BMP.</p>	Seattle
67	III-1.2 Choosing Your Runoff Treatment BMPs	<p>Provide guidance for identifying the pollutants of concern and choosing Runoff Treatment BMP's specifically for treating runoff from pollution generating "pervious" surface (PGPS) areas. Some BMP's do not seem appropriate for treating lawns and landscaped areas based on the pollutants of concern.</p>	Seattle
68	III-1.2 Choosing Your Runoff Treatment BMPs	<p>Clarify in Steps 4, 5 and 6 if Vegetated Filter Strips are suitable for treating runoff for pollution generating "pervious" surface (PGPS) areas (and if there are any other BMP's that are not appropriate for Runoff Treatment for pollution generating pervious areas).</p>	Seattle
69	III-1.2 Choosing Your Runoff Treatment BMPs	<p>Provide guidance to establish a landscaped area that is not considered to be a pollution-generating surface (i.e. area where pesticides, herbicides, fertilizers, and disruptive maintenance occurs and where loss of soil is not a concern). Would this require a covenant?</p>	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
70	III-1.2 Choosing Your Runoff Treatment BMPs	Provide guidance to determine the pollutants of concern and the appropriate Runoff Treatment BMP's for synthetic turf. The pollutants of concern on synthetic turf may be different (e.g. leaching from plastic and infill material, detergents used to wash the turf, suspended solids from infill materials, paints, etc.).	Seattle
71	III-2.2 Continuous Simulation Models	The last sentence in the first paragraph under "Using WWHM to Model Flow-Related Standards", coordinate with the section that states "and the wetlands protection standards as described in MR8: Wetlands Protection" since WWHM would not be capable of the proposed new Wetland Protection standards.	Seattle
72	III-2.2 Continuous Simulation Models	We will need a full report on why MGS Flood is not approved before we can comment on this. If they are just missing some LID modeling capabilities, I'm not sure that is a good reason to prevent the whole program. MGS Flood is much less "buggy" than WWHM. WWHM is notorious for errors, anomalies of giving different results when running the same model, and problems with working on certain computers. There would need to be some very serious problems with MGS Flood to say that it is not approved. Please consider having a technical panel that consists of consultants, muni agencies, and independent experts to review assumptions of both MGS & WWHM.	Seattle
73	III-2.6 Sizing Your Runoff Treatment BMPs	Describe the basis and actual calculations used to establish the difference of flowrates for Off-line vs On-line Runoff Treatment BMP's as calculated by WWHM or MGS Flood.	Seattle
74	III-3.2 Preparing a Stormwater Site Plan	<p>Vol. III-3.2 - Please change references to "grant of easement" for Site Plan, by providing the options that Ecology has indicated meet its intent. For at least two instances, change as follows: "... recordable document that can be attached to a declaration of covenant, and grant of easement <u>or other legal agreement or recordable document</u>, associated with each lot".</p> <p>Reason: This wording has needed adjustment since Ecology began to explore implementation of the current MS4 permits in coordination with MS4 permittees. Municipalities explained that they use various documents when issuing development authorizations, and often, or even typically, do not take a legal interest in property by recording an easement. Recording a declaration of covenant accomplishes Ecology's goal, as shown by the fact that Ecology used Seattle's declaration approach as the first example in Appendix 1 to its 2013 implementation guidance, "Western Washington Low Impact Development (LID) Operation and Maintenance," and by even more the flexible approach the 2013 guidance takes at "Legal Agreements and Recordable Documents."</p>	Seattle
75	S401 BMPs for the Building, Repair, and Maintenance of Boats and Ships	Change word "pipers" to "piers" in the last bullet item of Applicable Operational BMPs.	Seattle
76	S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	In Applicable BMPs, Deicing and Anti-icing Operations, bullet item 1, selection of materials to use is a suggestion. This activity is guided by safety issues as priority and selection of de or anti-icing products should be in the Recommended Additional BMPs section.	Seattle

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77	S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	In Applicable BMPs, Deicing and Anti-icing Operations, bullet item 2, selection of materials to use based on environmental impact is a suggestion. This should be in the Recommended Additional BMPs section.	Seattle
78	S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	The Maintenance Operations section appears to be inserted in error and does not apply to this BMP.	Seattle
79	S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	In the Recommended Additional BMPs section, bullet item 1; In addition to recommending that roadway surfaces be cleaned in spring it should be mentioned that drainage structures on heavily sanded roadways should be inspected and cleaned as necessary in spring as well as a suggestion.	Seattle
80	S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	Section on Maintenance Operations does not appear to relate to deicing and anti-icing. Consider placing this section elsewhere or renaming this BMP.	Seattle
81	S407 BMPs for Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots	In the Applicable Operational BMPs section, bullet item 8; Street, gutters, sidewalks, and driveways need to be swept. This states that this is to collect and dispose of loose debris and garbage. Please add "dusts and surface dirt" that should be swept up. Debris usually means material with measurable features rather than dust or dirt.	Seattle
82	S409 BMPs for Fueling At Dedicated Stations	In Applicable Operational BMPs, bullet item #7; prohibits the use of dispersants but dispersants can sometimes be advantageous if they are subsequently cleaned up with absorbents. It can allow a better cleanup and help minimize vapor pressure on the spill surface. Add to the end of the sentence , "unless removed for disposal following application. Dispersants are not allowed to enter treatment systems or discharge to sanitary sewer."	Seattle
83	S409 BMPs for Fueling At Dedicated Stations	Under the Applicable Structural Source Control BMPs, bullet item 3; it implies that the containment pad has a shutoff valve between the pad and the treatment facility and that this valve is normally kept closed. The valve should be on the outlet from the treatment facility which acts as part of the containment volume needed for the fueling area. In all cases, drainage from the spill containment pad should pass through treatment before discharging to the sanitary sewer or other outlet. Also, if there is a sanitary sewer connection at the site it should be the preferred method of discharge as opposed to discharge to a storm sewer or surface water. There are water miscible components of fuels (benzene, ethanol, etc) that will not be captured by oil water separators and should be routed to sanitary sewer as a first option rather than storm drainage. The last sentence in this bullet item states that the "spill control sump" must be sized in compliance with fire code. This should state that the "spill control capacity" must be sized... The spill control could be composed of multiple components not just sumps. In addition, fuel floats and it is not the size of the sump that is important for spill control capacity.	Seattle

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84	S409 BMPs for Fueling At Dedicated Stations	Under the Applicable Structural Source Control BMPs, bullet item 4; The last sentence states, "Raised sills are not required at the open-grate trenches that connect to an approved drainage-control system." Since the drains on the spill containment pad are not part of a drainage control system, rather a spill control system, does this mean that trench drains are not allowed to be used on the spill control pad but only to exclude run-on around the spill control pad? Add text to the end of this sentence, "or spill containment system."	Seattle
85	S409 BMPs for Fueling At Dedicated Stations	In a number of instances in this BMP it give the option to convey stormwater collected on the fuel island containment either to sanitary sewer or to treatment. Stormwater collected on this spill containment pad should always be routed through treatment first no matter the off-site discharge point. Without proper spill control treatment system prior to sanitary sewer discharge provides a high risk to the sewer system and should not be allowed.	Seattle
86	S409 BMPs for Fueling At Dedicated Stations	In the Additional BMP for Vehicles 10 feet in height or greater, bullet item #1; This states that a shutoff valve is required for spill control and be in the closed position in the event of spill. It then states that an automatic valve is preferred to minimize the time lapse between spill and containment. If the valve is to remain closed then where is the time lapse? How is this requirement different from a covered fuel pad option?	Seattle
87	S409 BMPs for Fueling At Dedicated Stations	In the Additional BMP for Vehicles 10 feet in height or greater, bullet item #2; it states that the valve may be opened to convey contaminated stormwater to sewer or to treatment. Wouldn't contaminated stormwater generally require treatment before being discharged to sanitary sewer or to any other discharge option? It is unclear that the BMPs in this section are different from the covered fueling area BMPs.	Seattle
88	S409 BMPs for Fueling At Dedicated Stations	In the Additional BMP for Vehicles 10 feet in height or greater, add a bullet item. "Uncovered fueling areas can contribute excessive stormwater volume to the sanitary sewer from impervious surfaces and should be approved by the local sewer utility." Size the spill control area similar to what is found in BMP S412, "Slope, berm, or dike the spill control areas to a dead-end sump, spill containment sump, a spill control oil/water separator, or other spill control device. The minimum spill retention time should be 15 minutes at the greater flow rate of the highest fuel dispenser nozzle through-put rate, or the peak flow rate of the 6-month, 24-hour storm event over the surface of the containment pad, whichever is greater. The capacity of the spill containment should be a minimum of 50 gallons with adequate additional volume provided for grit sedimentation."	Seattle
89	S409 BMPs for Fueling At Dedicated Stations	Under "Additional BMP for Vehicles 10 feet in height or greater", the first bullet states to keep an emergency shutoff valve in the closed position in the event of a spill. Include a discussion of oil stop valves, which will close automatically when there is a spill. Provide more guidance on automatic valves. Should automatic valves be required in some instances?	Seattle
90	S410 BMPs for Correcting Illicit Connections to Storm Drains	This BMP addresses illicit connections and should include illicit discharges as well. Change title to, "for Correcting Illicit Connections and Prohibited Discharges to Storm Drains."	Seattle

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91	S410 BMPs for Correcting Illicit Connections to Storm Drains	In Applicable Operational BMPs, bullet item 2; change word "discharge" to "connection"	Seattle
92	S410 BMPs for Correcting Illicit Connections to Storm Drains	In Applicable Operational BMPs, bullet item 4; change "unpermitted wastewater" to "prohibited". Not all prohibited discharges to storm sewers are water.	Seattle
93	S410 BMPs for Correcting Illicit Connections to Storm Drains	In Applicable Operational BMPs, bullet item 7; if these discharges are illicit or prohibited then why would a permit be available? Reword this bullet item to better define that some discharges may be acceptable with proper treatment and that local and state permits would be required for their approval.	Seattle
94	S410 BMPs for Correcting Illicit Connections to Storm Drains	Make the "Recommended Additional Operational BMPs" as a conditional "Applicable Operational BMP". Clarify this BMP with a preceding statement, "If required by local regulation or Ecology to identify and map your drainage..... This should be an enforceable BMP in many circumstances.	Seattle
95	S410 BMPs for Correcting Illicit Connections to Storm Drains	In Recommended Additional Operational BMPs, bullet item 1; add at the end of the sentence, "or discharge to local surface waters"	Seattle
96	S411 BMPs for Landscaping and Lawn / Vegetation Management	In the Applicable Operational BMPs section, bullet item 1; This is a structural BMP that requires installation of engineered soil/landscape systems. This should be a recommended BMP or in an Applicable Structural BMP section.	Seattle
97	S411 BMPs for Landscaping and Lawn / Vegetation Management	Many of the bullet items in the Applicable Operational BMPs are actually recommendations. If a bullet item is not enforceable then it should be placed in a recommended section. Choosing proper plants, disposal practices for weeds, composting practices, etc., are not activities directly tied to protecting stormwater and should be recommendations.	Seattle
98	S411 BMPs for Landscaping and Lawn / Vegetation Management	Bullet on Monitor tree support systems--second sub-bullet, and 3rd sub-bullet are over-prescriptive. Seattle Parks has large inventory of trees, and many new trees; gardeners and arborists will appropriately care for trees. Main bullet and first sub-bullet are sufficient for BMP.	Seattle
99	S411 BMPs for Landscaping and Lawn / Vegetation Management	Bullet on selecting the right plants -- add "proposed use and available maintenance"	Seattle
100	S411 BMPs for Landscaping and Lawn / Vegetation Management	Bullet on noxious weeds -- add "Washington State Noxious Weed List https://www.nwcb.wa.gov/printable-noxious-weed-list "	Seattle
101	S411 BMPs for Landscaping and Lawn / Vegetation Management	There are references to the "noxious weed list". Provide some guidance regarding where readers can find this list.	Seattle
102	S411 BMPs for Landscaping and Lawn / Vegetation Management	Under the Recommended Additional Operational BMPs, change "Use native plants in landscaping" to "Use native plants in landscaping where appropriate" or something similar. A non-native plant in the right setting might be preferable to a native in the wrong setting.	Seattle

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103	S412 BMPs for Loading and Unloading Areas for Liquid or Solid Material	In the Applicable Structural Source Control BMPs: At All Loading/Unloading Areas, bullet item 1; it says to conduct unloading or loading....in a manufacturing building, under a roof, or lean-to. Remove the word "manufacturing". It does not matter the use of the building.	Seattle
104	S414 BMPs for Maintenance and Repair of Vehicles and Equipment	In the Applicable Operational BMPs section, bullet item 2; This BMP requires placement of drip pans beneath leaking parts or vehicles. Additional requirement should be to actively manage these drip pans to prevent overflowing with rainwater and that they should be removed once the leak has stopped.	Seattle
105	S414 BMPs for Maintenance and Repair of Vehicles and Equipment	In the Applicable Operational BMPs section, bullet item 5; this BMP refers to "waste oil" when it should say "used oil".	Seattle
106	S414 BMPs for Maintenance and Repair of Vehicles and Equipment	The additional Applicable BMPs section list a number of BMPs from this manual and is unnecessary. This section should be removed or this type of section should be in every BMP. All other BMPs in this manual may be additionally applicable.	Seattle
107	S416 BMPs for Maintenance of Roadside Ditches	Recommended Treatment BMPs--reference numbers for biofiltration do not appear to be correct.	Seattle
108	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	General: BMP S417 as a topic should only be in the O&M portion of SWMMWW. Specific: In the Pollution Control Approach section it states that you do maintenance and cleaning to "obtain" proper operation. This should say to "maintain" proper operation to ensure that the BMPs continue to operate as designed to protect ground and surface waters." Additionally, it alludes to cleaning if there is debris, sediments, or oil. Oil is not the only pollutant that can be found in drainage. Many drains are impacted by concrete slurry, paints, gasoline, sewage dumped from RVs, other automotive fluids, illegal dumping, etc. Change the word "oil" to "pollutants".	Seattle
109	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	In the Applicable Operational BMP section, bullet item 3; this states that you should "prevent heavy sediment discharges to the sewer system". It appears the meaning is that though you have a treatment system, you should still not allow heavy sediment loading of the treatment system? Perhaps it should say, "prevent heavy sediment discharges to the treatment system"?	Seattle
110	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	In the Applicable Operational BMP section, bullet item 4; BMP advocates discharging debris and sludge to a sanitary sewer system. This may not meet local limits for the sewer utility. This suggestion should be removed.	Seattle
111	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	In Applicable Operational BMPs section add another bullet item that states that "Properly dispose of all solids, polluted material, and stagnant water collected through system cleaning. Do not decant water back into the drainage system from eductor trucks or vacuum equipment since there may be residual contaminants in the cleaning equipment. Do not jet material downstream into the public drainage system."	Seattle
112	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	In the Applicable Operational BMPs section, bullet item 7; This section advises to post warning signs adjacent to storm drain inlets. If this is an applicable BMP then the words "where possible" needs to be removed. If this is a recommended BMP then it should be moved to such a section.	Seattle

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113	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	The Additional Applicable BMPs section is not needed. This section lists just a few of the BMPs from this manual yet all BMPs may apply. Remove this section.	Seattle
114	S419 BMPs for Mobile Fueling of Vehicles and Heavy Equipment	In Applicable Operational BMPS section, bullet item 3; begins, "Ensure compliance with all 49 CFR 178 requirements for DOT 406 cargo tanker." Since not all mobile fueling is conducted from these specific tanker trucks it would be best to replace "DOT 406 cargo tanker" with, "all fuel delivery vehicles or containers."	Seattle
115	S419 BMPs for Mobile Fueling of Vehicles and Heavy Equipment	In Applicable Operational BMPS section, bullet item 8; it requires that immediate notification to the local fire department and appropriate regional office of the Department of Ecology for spills to surface or ground waters. This should also include a requirement to notify any local government agency with spill response and reporting requirements.	Seattle
116	S419 BMPs for Mobile Fueling of Vehicles and Heavy Equipment	In Applicable Operational BMPS section, bullet item 12; addresses cleanup of spilled fuel and to properly dispose. It probably should be mentioned that soil cleanup from spills of gasoline will likely be a dangerous/hazardous waste due to benzene levels. This will help prevent improper disposal of gasoline spill wastes as a solid waste.	Seattle
117	S419 BMPs for Mobile Fueling of Vehicles and Heavy Equipment	In Applicable Operational BMPs, bullet item #9; prohibits the use of dispersants but dispersants can sometimes be advantageous if they are subsequently cleaned up with absorbents. Dispersants can allow a better cleanup and help minimize vapor pressure on the spill surface. Add to the end of the sentence , "unless removed for disposal following application. Dispersants are not allowed to enter treatment systems or discharge to sanitary sewer."	Seattle
118	S419 BMPs for Mobile Fueling of Vehicles and Heavy Equipment	BMP on contaminated soil--modify to "immediately secure and promptly remove and dispose of soils..." It may not be practicable to immediately remove contaminated soils.	Seattle
119	S420 BMPs for Painting/Finishing/Coating of Vehicles/Boats/Buildings/Equipment	In the Applicable Operational BMPs section, bullet item 8 states, "Dump pollutants collected in portable containers into a sanitary sewer drain, NOT a stormwater drain." This statement is alarming! It is not clear what the purpose of the statement is and it should be removed.	Seattle
120	S420 BMPs for Painting/Finishing/Coating of Vehicles/Boats/Buildings/Equipment	In the Applicable Operational BMPs section, bullet item 10 states, "Store toxic materials under cover (tarp, etc.) during precipitation events and when not in use to prevent contact with stormwater." Instead of "toxic" materials it should state, "pollution generating" materials.	Seattle
121	S421 BMPs for Parking and Storage of Vehicles and Equipment	In the Applicable Operational BMPs section, bullet item 2; The second sentence says to vacuum sweep lots, storage areas, and driveways. There are many areas of these facilities that can't be accessed by a vacuum sweeper and are usually neglected and accumulate pollutants. This sections and similar referral to vacuum sweeping should also encourage other forms of sweeping to ensure that all areas are cleaned. Mechanical and hand sweeping area options. Using a blower to push dirt, waste, and debris into an area that can be vacuum swept is also an option.	Seattle

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122	S421 BMPs for Parking and Storage of Vehicles and Equipment	In the Applicable Operational BMPs section, bullet item 4; This BMP requires placement of drip pans beneath leaking vehicles. Additional requirement should be to actively manage these drip pans to prevent overfilling with rainwater and that they should be removed once the leak has stopped.	Seattle
123	S421 BMPs for Parking and Storage of Vehicles and Equipment	In the Applicable Treatment BMPs section it lists examples of potential high use areas that might require oil control BMP but focuses on mainly commercial uses. I would suggest adding an additional industrial example, "parking, storage or maintenance of 25 or more vehicles that are over 10 tons gross weight (trucks, buses, trains, heavy equipment, etc.)".	Seattle
124	S422 BMPs for Railroad Yards	In the Description of Pollutant Sources it refers to wastes that can be generated such as "waste" oil. Suggest this should be "used" oil.	Seattle
125	S422 BMPs for Railroad Yards	In the Applicable Operational and Structural Source Control BMPs, bullet item 8; it refers to a particular water based coolant (from multi-punch presses) that should not be dumped into storm drains. It should just state that water based coolants should not impact the storm drainage system.	Seattle
126	S423 BMPs for Recyclers and Scrap Yards	In Applicable BMPs section, bullet item 7; it states that all fluid containers must comply with secondary containment requirements. This is only true for some containers stored outside. Perhaps it would be best to refer to BMP S427 for proper compliance of containers stored outside. Additionally, it specifically singles out containers of gasoline as requiring compliance with Fire Codes. All flammable and combustible fluids would need to comply with Fire Codes to include diesel.	Seattle
127	S423 BMPs for Recyclers and Scrap Yards	In the Required Routine Maintenance section it addresses transportation requirements for trucks. This requires trucks to have a spill kit and impermeable liner in the bed of the truck. This is not a maintenance issue. Stormwater code should not address transportation requirements that are the purview of another agency. This bullet item should be removed.	Seattle
128	S424 BMPs for Roof / Building Drains at Manufacturing and Commercial Buildings	In the Description of Pollution Sources it states that buildings can be sources of pollutants caused by leaching of roofing materials.... PCBs can be found in paints and caulking used before 1980. Add ", paints, caulking," after roofing materials. In the last sentence in this section it lists some of the pollutants and should include PCBs for buildings built prior to 1980.	Seattle
129	S424 BMPs for Roof / Building Drains at Manufacturing and Commercial Buildings	In the Applicable Operational Source Controls BMPs section, bullet item 2 states to, "Sweep the area routinely to remove any zinc residuals." Users of this manual may think that only zinc items need to be swept up. It might be best to explain that zinc adheres to soil particles and that sweeping up surface dirt as well as metal fragments can help remove sources of zinc.	Seattle
130	S426 BMPs for Spills of Oil and Hazardous Substances	This section refers to a Spill Prevention and Emergency Cleanup Plan (SPECP) and identifies this as being required by federal law. Federal law requires a spill prevention and response plan or a Spill Prevention Control and Countermeasures (SPCC) plan. Ecology is the agency that requires a SPECP as part of the SWPPP required by NPDES permit coverage. This section improperly identifies the SPECP as the SPCC for oil storage of 1320 or more gallons. In addition, this section states that a SPECP is required for "businesses that produce dangerous wastes", which is untrue. This section should be cross checked with other state and federal regulations to make this requirement more accurate.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
131	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	Change the name of this to "BMPs for Storage of Portable Containers". This BMP should apply to all containers of materials or waste that can pose a threat to stormwater. As it is written, this BMP only applies to liquid drums or drums of solid Dangerous Waste. Dangerous Wastes accumulation or storage areas are already regulated by WAC 173-303 and require exactly this level of protection in nearly every situation unless the container sotrage areas were built prior to 1986.	Seattle
132	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	Remove the following from the Pollution Control Approach section, "When collection trucks directly pick up roll-containers, ensure a filet is on both sides of the curb to facilitate moving the dumpster. For storage areas on-site for less than 30 days, consider using a portable temporary secondary system like that shown in Figure 1-1520.1: Figure IV-2.2.8 Secondary Containment System in lieu of a permanent system as described above." This information is more appropriate as a bullet item in the Recommended BMP section and not as a description the pollution control approach. Add a sentence to define the approach as "to secure containers to prevent spillage or exposure."	Seattle
133	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Description of Pollutant Sources, the third sentence is very prescriptive in defining the type of material this BMP is to be used on, "Use these BMPs when temporarily storing accumulated food wastes, vegetable or animal grease, used oil, liquid feedstock, cleaning chemicals, or Dangerous Wastes (liquid or solid). " I would recommend striking the specific materials and simply refer to containers of "potential pollution generating materials or wastes". This would also make it applicable to solid materials other than Dangerous Wastes. Storing containers of caustic powders, oxidizers, oily coated metal parts, and solid wastes that are not a Dangerous Waste can pose a hazard to stormwater.	Seattle
134	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Applicable Operational BMPs section, bullet item 2; This states that all containers must be labeled with "accumulation start dates", however product containers and food wastes would not have need for such a date. Add additional information such as, "Position containers so labels are clearly visible."	Seattle
135	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Applicable Operational BMPs section, bullet item 5; states that, "Businesses accumulating Dangerous Wastes that do not contain free liquids need only to store these wastes in a sloped designated area with the containers elevated or otherwise protected from storm waterstormwater run-on." This implies that the other bullet items do not apply, such as keeping a tight lid on the container. Solid Dangerous Wastes can also be ignitable or reactive solids and should be managed safely and in compliance with Fire Code. Change this to, "Store containers that do not contain free liquids in a designated sloped area with the containers elevated or otherwise protected from stormwater run-on. Comply with local fire code."	Seattle
136	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Applicable Operational BMPs section, add another bullet item. "Empty drums containing residues should be stored to prevent stormwater from entering drum closures. Cover or tilt drums to prevent stormwater from accumulating on the top of empty drums and around drum closures."	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
137	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	<p>In the Applicable Operational BMPs section, bullet item 12; it states to drain dumpsters and/or dumpster pads to sanitary sewer. This is a structural source control BMP and should be moved to that section. If dumpster pads are to be plumbed to the sanitary sewer there may be concern from the local sewer utility about adding extra stormwater into the sanitary sewer system and should be addressed in your bullet statement. This bullet item also states, "Keep dumpster lids closed." The previous bullet item addresses covering dumpsters and is a more appropriate place for this statement. The last sentence in this bullet item states, "Install waterproof liners." This would be best to add to the last sentence in the previous bullet item with an "or" where it states, "Replace or repair leaking garbage dumpsters." The result would be, "Replace or repair leaking garbage dumpsters or install waterproof liners."</p>	Seattle
138	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	<p>In the Applicable Structural Source Control BMPs section the third bullet item states, "For liquid wastes, surround the containers with a dike as illustrated in Figure 1-1520.3: Figure IV-2.2.10 Covered and Bermed Containment Area. The dike must be of sufficient height to provide a volume of either 10 percent of the total enclosed container volume or 110 percent of the volume contained in the largest container, whichever is greater." Containers of dangerous liquid products that are not waste would be excluded from this secondary containment requirement when they pose a similar hazard. Remove and replace both the second and third bullet items into text, "Store liquid containers other than clean water in a designated area. Provide covered secondary containment that is capable of holding a volume of either 10 percent of the total volume of the enclosed containers or 110 percent of the volume of the largest container, whichever is greater. Provide a portable secondary containment unit or cover and pave the storage area with an impervious surface and install a berm or dike to surround the area. Slope the area to drain into a dead-end sump for the collection of leaks and small spills." or something similar.</p>	Seattle
139	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	<p>In the Applicable Treatment BMPs section it addresses treatment of stormwater collected in drum storage containment areas. The previous section addresses structural Source Control BMPs and states that containment area must go to a dead end sump. By definition this is a sump without an outlet yet this treatment BMP says to connect the sump outlet to a sanitary sewer. If the containment area is properly covered there will accumulate very little stormwater and a dead-end sump can be pumped out for disposal after testing or treatment. Remove the first bullet item in this section or better define if a dead end sump is always needed for containment.</p>	Seattle
140	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	<p>Bullet on labeling--agree with label with contents. Accumulation date is only necessary for dangerous waste; owner information is not necessary if containers are secured in area without unauthorized personnel.</p>	Seattle
141	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	<p>Under the last bullet, "Drain dumpsters and/or dumpster pads to sanitary sewer", add language that this requires approval from the local jurisdiction.</p>	Seattle

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142	S428 BMPs for Storage of Liquids in Permanent Aboveground Tanks	Large petroleum product tank farms typically do not have an impervious bottom within their containment area. During spills, this design is to prevent the concentration of highly volatile flammable liquids from being contained in an open pool which can cause an extreme fire risk. This design requirement to have an impervious bottom within the containment area is also not a requirement of SPCC. If this impervious containment is a requirement then many large petroleum product tank farms will require modification to conform.	Seattle
143	S428 BMPs for Storage of Liquids in Permanent Aboveground Tanks	In the Pollutant Control Approach section it focuses on treatment of collected stormwater through oil removal treatment BMPs though the tanks can hold any type of material other than uncontaminated water. Tanks could contain inorganic acid or caustic solutions, water miscible solvents, immiscible solvents with specific gravity denser than water, or any other non-oil type of material. It might be best to be less specific about the type of treatment needed for containment water.	Seattle
144	S428 BMPs for Storage of Liquids in Permanent Aboveground Tanks	In the Applicable Structural BMPs section it states to "Slope the secondary containment to drain to a dead-end sump or equivalent, for the collection of small spills." This would mean that there is no direct connection to storm or sewer from this containment. In the Applicable Treatment BMPs it states, "For an uncovered tank containment area, equip the outlet from the spill-containment sump with a normally closed shutoff valve. Operators may open this valve manually or automatically, only to convey contaminated stormwater to approved treatment or disposal, or to convey uncontaminated stormwater to a storm sewer." These two statements are incompatible since a dead-end sump or equivalent should not be connected to the storm sewer.	Seattle
145	S428 BMPs for Storage of Liquids in Permanent Aboveground Tanks	In the Applicable Treatment BMPs, bullet item 2; it discusses possible ways to determine that collected stormwater in the tank containment area is clean enough to discharge to the storm sewer. The operator should be required to develop a written plan that defines the process used to determine that the collected stormwater is clean and to document in a log that this process was followed and when water was discharged.	Seattle
146	S428 BMPs for Storage of Liquids in Permanent Aboveground Tanks	In the Applicable Treatment BMPs, bullet item 3; it states that petroleum tank farms must treat stormwater contaminated with floating oil or debris prior to discharge to storm drain or surface water. This should include an option or recommendation to go to sanitary sewer if approved.	Seattle
147	S429 BMPs for Storage or Transfer (Outside) of Solid Raw Materials, Byproducts, or Finished Products	This BMP has a section titled, "Applicable Operational BMP" with a subsection titled, "The Following are additional Recommended Operational BMPs". Many of these recommended BMPs should be required. Bullet item 1 requires proper sloping of the storage area to prevent pooling and leachate formation. This should be required. Bullet item 2 states to sweep paved storage areas regularly which should be required. Bullet item 3 says to stock cleanup materials near the storage area, this too should be required. Make these all required items.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
148	S429 BMPs for Storage or Transfer (Outside) of Solid Raw Materials, Byproducts, or Finished Products	Add a bullet item for Applicable Operational BMPs to include, "For stockpiles less than 5 cubic yards not covered with a structure, cover the pile with temporary plastic sheeting or equivalent temporary cover. Keep the pile covered when the pile is not actively in use." A pile of less than 5 yards can still be a potent source of pollution depending on the material and should be covered.	Seattle
149	S429 BMPs for Storage or Transfer (Outside) of Solid Raw Materials, Byproducts, or Finished Products	In the Applicable Structural BMP section one option is to use a temporary tarp or plastic sheeting to cover piles or storage areas. This really is not a structural BMP and should be in the Applicable Operational BMP section.	Seattle
150	S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	Remove Applicable Structural Source Control BMPs, bullet item 3. This is duplicative of bullet item 2. Note in bullet item 2 that if a manual valve is used that a tool must be located near the valve and clearly marked to identify its use.	Seattle
151	S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	In Applicable Structural Source Control BMPs, bullet item 4; This section addresses diverting clean stormwater from passing through the pre-treatment system off of the wash pad. This is currently worded in a confusing way. It appears the author is trying to suggest a two way diversion valve rather than a valve that is open or closed. The diversion valve should be switched to discharge to the drainage system when washing is not happening and switched to the treatment system and sanitary sewer when washing is happening.	Seattle
152	S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	In Recommended Additional BMPs, bullet item 1; identify what needs to be marked at the wash area. Suggest that it be signed to identify the use as a wash area, use instructions, outline of acceptable wash area (pavement marking), location of the valve tool, etc.	Seattle
153	S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	last bullet- typo "properly"	Seattle
154	S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	Under the second paragraph, "Permitting Requirements", add language that states that there may be limits on the amount of stormwater that can be discharged to sanitary sewers.	Seattle
155	S433 BMPs for Pools, Spas, Hot Tubs, and Fountains	In the Description of Pollutant Sources section it states, "Industrial Stormwater Permittees that use pools, spas, hot tubs, and fountains as part of an industrial process should refer to their Industrial Stormwater Permit." Not familiar with any industrial process that uses a spa, hot tub, or fountain as part of their industrial process. Have seen used decoratively or in a commercial setting such as health club but not as a industrial process.	Seattle
156	S434 BMPs for Dock Washing	Perhaps this section should address cleaning up pollutants (sweeping or vacuuming) before washing with low pressure water only. If slippery substance or pollutants need to be removed by more active force then a capture system must be used to remove the wastewater generated. All other bullet items are suggestions.	Seattle
157	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 1; remove from second sentence "at least once per week or". Why would a weekly dock cleaning be necessary?	Seattle

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158	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 5; this item is a suggestion ("Try pressure washing using light pressure...") and should be in a section identified as recommended.	Seattle
159	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 6; this item is a suggestion and should be in a section identified as recommended.	Seattle
160	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 7; remove "on shore" from the end of the sentence. Using the term "on shore" makes it seem possible that it could be dumped onto the shore.	Seattle
161	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 8; this item is a suggestion and should be in a section identified as recommended. "If a cleaner is needed, start with vinegar and baking soda and move to other options as needed..."	Seattle
162	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 10; this item is a suggests that washwater, debris, and "substances" can be disposed onto land at the end of the dock. This land disposal of washwaters is prohibited in BMP S431. Change one BMP or the other to make them consistent.	Seattle
163	S435 BMPs for Pesticides and an Integrated Pest Management Program	Many of the Applicable Operational BMPs are suggestions rather than requirements. Move any suggestions or opinions to the Recommended Additional Operational BMPs section. This includes bullet items #1, 2, 7, 8, 9, 13, and 14. Are all pesticide applications required to have an IPM? If development and implementation of an IPM is recommended and not universally required it should be moved to the Recommended section. Bullet items 5 and 6 should be subcategories of bullet item 4.	Seattle
164	S435 BMPs for Pesticides and an Integrated Pest Management Program	Add additional bullet item to Applicable Operational BMPs. "For chemical applied roof moss control, prevent runoff from entering downspouts or otherwise contaminate stormwater."	Seattle
165	S436 BMPs for Color Events	In the Applicable Operational BMPs section add a bullet item "Plan your event route within areas that drain to a combined sewer if available."	Seattle
166	S439 BMPs for In-Water and Over-Water Fueling	The Applicable Operational BMPs for Fuel Docks section, bullet item 1; Have an employee supervise the fuel dock. should be revised to, "Have a trained employee supervise the fuel dock."	Seattle
167	S439 BMPs for In-Water and Over-Water Fueling	The Applicable Operational BMPs for Fuel Docks section, bullet item 9; Train staff on proper fueling procedures.. should be revised to, "Train staff on proper fueling procedures. Document training and retain records."	Seattle
168	S440 BMPs for Pet Waste	New apartment and condominium buildings are offering pet friendly amenities such as roof-top dog runs with pet relief stations. Many of these are built with underdrains connected to the roof drainage which may end up in the storm sewer system or they could end up in stormwater detention systems that go to sanitary sewer. Many of these designs include automatic irrigation water to clean these surfaces to prevent odor problems. This manual should caution users that these amenities should be properly planned to prevent drainage from these areas from impacting public drainage or causing problems with stormwater detentions systems.	Seattle

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169	S440 BMPs for Pet Waste	<p>BMPs for Pet Waste should apply to private entities and is not appropriate for public parks. Municipal permittees are required to to develop education and outreach programs that address pet waste management and disposal (Phase I S5.C.11). Municipal programs have been developed based on specific needs of the jurisdiction. As such, pet waste stations and publically supplied disposal bags have been located in prioritized locations.</p> <p>Seattle suggests the revision of Applicable Operational BMPs 6th bullet to read: When planning a ((ADD)private) recreation site or multi-family housing complex provide biodegradable disposal bags and disposal stations with signage. Alternatively, this should be moved to Optional Operational BMPs.</p>	Seattle
170	S440 BMPs for Pet Waste	<p>Applicable Operational BMP to "Carefully consider the placement of pet waste stations. Choose locations convenient for dog walkers to pick up a bag at the start of their walk and locations for them to dispose of it at mid-walk or at the end of their walk." Please clarify that this does not apply to public areas and are meant for private sites. Alternatively, this should be moved to Optional Operational BMPs.</p>	Seattle
171	S440 BMPs for Pet Waste	<p>Applicable Operational BMP to "check pet waste stations" and keep stocked. Please clarify that this does not apply to public areas and are meant for private sites. Alternatively, this should be moved to Optional Operational BMPs.</p>	Seattle
172	S440 BMPs for Pet Waste	<p>Applicable Operational BMP to "bathe pets indoors or have pets professionally groomed." Seattle recommends: "Bathe pets indoors or ((ADD) in a manner that wash water won't be discharged) ((DELETE) have pets professionally groomed."</p>	Seattle
173	S440 BMPs for Pet Waste	<p>Add a section for Rooftop Dog Runs, as these are commonly being constructed on new apartments and condos. These facilities are typically constructed of artificial turf and include washing systems. New construction is currently required to discharge these dog runs to the building sanitary plumbing system. There is a limit on the size (200sf in Seattle) that can discharge stormwater to the plumbing system unless it discharges to the combined sewer. The BMP should make it clear that typical rooftop dog runs cannot discharge to storm, and to check with the local jurisdiction regarding stormwater limits to the sanitary system.</p>	Seattle
174	S441 BMPs Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing	<p>In Optional Operational BMPs, bullet item 1; what is storm drain flushing and how would you use a hydrant for this purpose? Storm drain flushing with potable water seems like a prohibited discharge.</p>	Seattle
175	S441 BMPs Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing	<p>In Optional Operational BMPs, bullet item 3; flushing and tank maintenance discharges on a dry day will concentrate the pollutants disturbed from these activities. If drainage line capacity issues are not a factor it might be wiser to flush or hydrant test on days where the stormwater flow will dilute the non-stormwater. I would recommend removing this bullet item.</p>	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
176	S441 BMPs Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing	In Optional Treatment BMPs, bullet item 2; It states that you should not over apply dechlorination agents. This sounds more like an enforceable requirement and not a suggestion. This should be moved to Applicable Operational BMPs.	Seattle
177	S443 BMPs for Fertilizer Application	Many of the Applicable Operational BMPs are suggestions and should be moved to the Recommended Operational BMPs section. The BMP addressing turfgrass is just a statement and not a BMP. Some of these bullet items are redundant such as addressing applying appropriate amounts of fertilizer and when best to apply (see bullet items 5 and 14).	Seattle
178	S444 BMPs for the Storage of Dry Pesticides and Fertilizers	Change "carbonates" to "carbamates" in the Description of Pollution Sources section.	Seattle
179	S444 BMPs for the Storage of Dry Pesticides and Fertilizers	This BMP applies to dry materials yet in the Applicable Structural BMPs it requires this material to be enclosed or covered. Enclosure usually refers to enclosed by sides while cover is a roof. Dry pesticides should be covered.	Seattle
180	S444 BMPs for the Storage of Dry Pesticides and Fertilizers	In the Applicable Operational BMPs section, bullet item 2; Change the word "water" at the end of the sentence to "stormwater". This should read, "Store all material so that it cannot come into contact with stormwater."	Seattle
181	S444 BMPs for the Storage of Dry Pesticides and Fertilizers	In the Applicable Operational BMPs section, bullet item 7; this BMP advise to not discharge pesticide wastes to the storm sewer. This should also remind user to not discharge this waste to the sanitary sewer. This should also advise the same precaution for fertilizers.	Seattle
182	S446 BMPs for Well, Utility, Directional and Geotechnical Drilling	In Applicable Operational BMPs, bullet item 8; "Keep all sediment-laden water out of storm drains and surface waters. If sediment-laden water does escape from the immediate drilling location, block flow to any nearby waterways or catch basins using fabric, inlet protections, sand bags, erosion fences, or other similar methods." Add "Notify local utility and state agencies if sediment laden waters impact public drainage systems or local waters."	Seattle
183	S446 BMPs for Well, Utility, Directional and Geotechnical Drilling	In Applicable Operational BMPs, bullet item 10; it discusses temporary stockpiling of cuttings or soils. This should refer back to BMP S429.	Seattle
184	S446 BMPs for Well, Utility, Directional and Geotechnical Drilling	In Applicable Operational BMPs, bullet item 11; it discusses stabilizing exposed soils at the end of the project. This should refer back to BMP S425.	Seattle
185	S446 BMPs for Well, Utility, Directional and Geotechnical Drilling	In Applicable Operational BMPs, bullet item 12; states that spent drilling slurry can be dewatered on site or hauled to a disposal site. Is disposal of drilling slurry on site allowed?	Seattle
186	S447 BMPs for Roof Vents	Some of the Applicable Operational BMPs are actually structural requirements. Installing air pollution control equipment or treatment systems for roof runoff are not operational.	Seattle
187	S451 BMPs for Building, Repair, Remodeling, Painting, and Construction	In Applicable Operational BMPs, bullet item 4; identifies scofflaws as a threat to materials that are not put away or secured at the end of the day. I suggest that in addition to scofflaws; vandals, crooks, and other malefactors be added to the list of potential ruinators.	Seattle
188	S452 BMPs for Goose Waste	This BMP needs to be identified as Recommended and not Applicable.	Seattle

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189	S452 BMPs for Goose Waste	Bullets 5 through 8 of Applicable Operational BMPs should be moved to Optional Operational BMPs. Scaring geese away and requiring landscaping to deter geese are should not be required.	Seattle
190	S453 BMPs for Formation of a Pollution Prevention Team	This BMP should be identified as a Recommended Operational BMP or Applicable Operational BMP.	Seattle
191	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 1; eliminate this bullet item. This is redundant requirements found in multiple other BMPs, S410, S431, etc. This element has nothing to do with preventative maintenance or good housekeeping.	Seattle
192	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 2; this is redundant and included in BMP S455. This element has to do with spill cleanup.	Seattle
193	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 5; add second sentence, "Use mechanical sweepers, and manual sweeping as necessary to access areas that a vacuum sweeper can't reach to ensure that all surface contaminants are routinely removed." See similar comment in S421.	Seattle
194	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 7; this should be recommended or it should be an "Applicable Structural BMP". Constructing an impervious surface is more than preventive maintenance of good housekeeping.	Seattle
195	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 8; move this to BMP S455	Seattle
196	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 9; remove this bullet item, it does not address stormwater issues or may be addressed in other BMPs	Seattle
197	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 11; Move this to BMP S427. Remove the section in sentence 1, "contaminated with liquids or other potential polluted materials".	Seattle
198	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 13; this item addresses cleaning of drainage and treatment systems and should be in BMP S417. Remove from this BMP.	Seattle
199	S454 BMPs for Preventive Maintenance / Good Housekeeping	Bullet regarding paving over contaminated soil--consider deleting this bullet as it conflicts with MTCA. Perhaps it could be revised to state that if spills have contaminated soil, cleanup of the release will be completed in a manner consistent with MTCA regulations.	Seattle
200	S454 BMPs for Preventive Maintenance / Good Housekeeping	Bullet on "promptly repair or replace cracks" -- This should be an Optional BMP.	Seattle
201	S455 BMPs for Spill Prevention and Cleanup	General: BMP S455 should apply where there is high risk for spills. Specific: In Applicable BMPs, Spill Prevention, bullet item 1; Change "label" to "label or mark". Typically a label is an affixed sticker with information. DOT regulations defines a marking and a label as two distinct ways to convey information. Also define what is required to be on the label or marking.	Seattle
202	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup Kits, bullet item 1; change "qualities" to "quantities"	Seattle
203	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup Kits, bullet item 1; Remove the second sentence since secondary containment does not pertain to a spill cleanup kit.	Seattle

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204	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup Kits, bullet item 2; this is a recommended bullet item and should be added at the end of this BMP in a section identified as "recommended" to be consistent with the other BMP formats.	Seattle
205	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup and Proper Disposal of Materials; Change this title to remove the word "material" and substitute "waste". If you dispose of something then it is waste.	Seattle
206	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup and Proper Disposal of Materials, bullet item 6; add at the end of the sentence "unless the spill generated waste is removed for proper disposal."	Seattle
207	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup and Proper Disposal of Materials, bullet item 7; after the word "report" add "to all appropriate and necessary public agencies"	Seattle
208	S456 BMPs for Employee Training	Identify this as an Applicable BMP or Applicable Operational BMP	Seattle
209	S456 BMPs for Employee Training	Add a final bullet item that states, "Train employees upon initial work assignment in pollution source areas and annually. Document training and keep training records on file"	Seattle
210	S457 BMPS for Inspections	General: S457 should be optional for homeowners. Specific: Identify this as an Applicable BMP or Applicable Operational BMP	Seattle
211	S457 BMPS for Inspections	These are not just visual inspections if you are looking for odors. Change the term "visual inspections" to be "pollution source control inspections" or something similar.	Seattle
212	S457 BMPS for Inspections	Add a final bullet item that states, "Identify actions to address inspection deficiencies." The person conducting the inspection must sign the inspection document.	Seattle
213	S458 BMPs for Record Keeping	Remove the first bullet item sub-bullets and put them into BMP S457. This removed information identifies what items to record for a "visual" inspection in S457.	Seattle
214	S458 BMPs for Record Keeping	Change first bullet item to read, "Monthly pollution source control inspection reports."	Seattle
215	S458 BMPs for Record Keeping	Make changes to bullet item 2. Eliminate first sentence since it is captured in the second sentence anyway. Change the second sentence to begin with, "Report spills that cause:" There are many other chemicals that could be spilled that would violate the WQS.	Seattle
216	S458 BMPs for Record Keeping	Take out the section about reporting spills and add this to BMP S455 (Spill Prevention and Cleanup)	Seattle
217	V-5.2 Infiltration BMP Design Steps	Under step 3, clarify if the infiltration rate assumed is the measured or design rate	Seattle
218	V-5.3 General Design Criteria for Infiltration BMPs	The last two bullets under the Maintenance Criteria section seem to contradict each other - "The Water Quality Design Volume does not infiltrate within 48 hours" and "Water remains in the BMP for greater than 24 hours after the end of most moderate rainfall events". If the water quality design volume has 48 hours to drain, then water will remain in the BMP for greater than 24 hours after the end of the rainfall event.	Seattle

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219	V-5.3 General Design Criteria for Infiltration BMPs	Runoff Treatment Prior to Infiltration BMP's: if Runoff Treatment is required whether or not the MR6 -Runoff Treatment or the I-4 UIC Guidelines are required, why even have the fourth bullet point "If the project is proposing infiltration, but is not required to meet..." Perhaps revise this section to indicate that whether or not MR6 or UIC Guidelines are already required or not, Runoff Treatment Prior to Infiltration BMP's is required.	Seattle
220	V-5.3 General Design Criteria for Infiltration BMPs	Section: "Treatment Prior to Infiltration BMPs", has a new requirement that requires "pretreatment" to all infiltration BMPs. Installing "pretreatment" regardless of pollutants of concern or size of area draining to a LID BMP is a huge barrier to LID installation due to the added area required to install both a "basic treatment" for pretreatment as well as the actual BMP, while also maintaining gravity flow to the approved point of discharge. The Chart of Changes states that this information originated from Vol 5-2.1, which is targeting Runoff Treatment BMPs. It states that "A pretreatment BMP to remove a portion of the influent suspended solids should precede all infiltration BMPs.....Use either a basic treatment BMP, as described in III-11.2...or a pretreatment BMP as described in V-9 Pretreatment BMPs." Please edit text so that original intent applies from previous manual and that a pretreatment facility (i.e. a basic treatment facility or a presettling basin with a volume of 30% of the runoff from the 6 month 24 hour storm) is not required, for example, to meet the list approach of MR#5.	Seattle
221	V-5.6 Site Suitability Criteria (SSC)	SSC-5 Depth to Bedrock, Water Table, or Impermeable layer - why are only Infiltration Basins and Trenches listed? What about other Infiltration BMPs?	Seattle
222	V-5.6 Site Suitability Criteria (SSC)	SSC-4 Soil Infiltration Rate/Drawdown Time: clarify if there are minimum measured infiltration rates in this section.	Seattle
223	V-9.1 Introduction to Pretreatment BMPs	This section is just for larger scale BMPs and does not address BMPs such as bioretention or permeable pavement	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
224	Appendix I-D: Regional Facilities	<p>This new appendix is confusing and may have unintended regulatory consequences when the MS4 permit requires a local jurisdiction to adopt the SWMMWW or an equivalent manual. Seattle thinks that Ecology's intent in adding this Appendix is to put guidance related to regional facilities in one location for easier reference – not to add new requirements. The new appendix appears to be primarily information pulled together from other documents with new guidance/examples on how some items can (but not must) be done. Unfortunately, the appendix is not very cohesive. Ecology's presumed intent that the appendix is optional for MS4s' use is not clear. We are available to discuss these comments and this draft appendix. General areas of concern are:</p> <ul style="list-style-type: none"> •New descriptions may have unintended consequences, and should be revised or removed. •The appendix must explain that it is optional guidance for MS4s that regulate development. If there are requirements and limitations for MS4s, they need to be stated in the NPDES Permit, not in the SWMMWW. Permittees have understood that a local development permitting authority is not limited by the MS4 Permit (and is in compliance) when it allows development to meet certain stormwater requirements off site, to the extent allowed by state and federal statutes and rules. If Ecology intends to change that principle, in any circumstances, it is not clear. Further the draft "Stormwater Control Transfer: Out of Basin" guidance was and is purely optional. To the extent that Appendix I-D is drawn from that draft guidance, it should also be optional, •Guidance is written as a "must do" instead of as an example of how "could be done". This is especially problematic for MS4s that are required to regulate development; for example, the guidance and examples address solely MR7 Flow Control requirements, when in fact regional facilities are also capable of meeting MR6 Runoff Treatment requirements. 	Seattle
225	Appendix I-D: Regional Facilities	Per previous comment, Please rework Appendix I-D to make its intent and optional status clear or remove the appendix from manual.	Seattle
226	Appendix IV-B: Management of Street Wastes	<p>General: Please carefully compare App. IV-B to the August 2018 final Solid Waste Handling Standards at WAC 173-250 and apply and quote from it; some references do not match the final version. Example: Terms "impacted soil" and "impacted sediment" are not used in the final rule and the definition and examples for "contaminated soil" have been altered. Specific comment: Section: Contamination in Street Waste Solids, paragraph beginning "Ecology suggests a street waste site evaluation..."</p> <p>Suggested wording: "Ecology suggests a street waste collection site evaluation (see sample at end of this appendix) for all street waste as a method to identify spill sites or locations that are more polluted than normal to prevent street waste collected from those sites from mixing with typical street waste."</p>	Seattle
227	Appendix IV-B: Management of Street Wastes	<p>Section: Contamination in Street Waste Solids, paragraph beginning "Street waste treatment and storage facilities owned or operated by governmental agencies should be"...</p> <p>Suggested wording: "Street waste treatment and storage facilities, as defined by the Solid Waste Handling Rule, owned or operated by governmental agencies should be..."</p>	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
228	Appendix IV-B: Management of Street Wastes	Section: Contamination in Street Waste Solids, paragraph beginning "Street waste treatment and storage facilities owned or operated by governmental agencies should be"... Suggested wording: "The operators of street waste facilities should restrict the use of their facilities to waste collectors certified and/or licensed by the operator or ??,who have met the operator's training and liability requirements."	Seattle
229	Appendix IV-B: Management of Street Wastes	Section: Contamination in Street Waste Solids, paragraph beginning "The use of street waste solids under this guidance should not lead to ..." Suggested wording: "The reuse of street waste solids under this guidance should not lead to ..."	Seattle
230	Appendix IV-B: Management of Street Wastes	Section: Contamination in Street Waste Solids, paragraph beginning "Testing of street waste solids will generally be required as part of a plan of operations ..." Comment: Baseline testing of leaves picked up by street sweeping near streets with high traffic volumes and/or industrial landuse may be prudent.	Seattle
231	Appendix IV-B: Management of Street Wastes	Section: Street Waste Liquids, paragraph beginning "Street waste liquids require treatment before their discharge.." Suggested wording: "Street waste liquids, which includes eductor and street sweeping truck decant and drainage from piles and containers, require pretreatment before their discharge."	Seattle
232	Appendix IV-B: Management of Street Wastes	Section: Street Waste Liquids, paragraph beginning "1. Discharge of Street Waste decant liquids to a municipal sanitary sewer..." Suggested wording: "1. Discharge of street waste liquids to a municipal sanitary sewer..."	Seattle
233	Appendix IV-B: Management of Street Wastes	Section: Street Waste Liquids, paragraph beginning "2. Discharge of Street Waste decant liquids may be allowed into a Basic or Enhanced BMP, ..." Suggested wording: "2. Discharge of street waste liquids may be allowed into a Basic or Enhanced BMP, if option 1 is not available. Only discharge solid waste liquid into the storm sewer system under the following conditions:..."	Seattle
234	Appendix IV-B: Management of Street Wastes	Section: Street Waste Liquids, paragraph beginning "● The discharge is as near to the Runoff Treatment BMP as is practical, to minimize contamination or ..." Please clarify: What discharge? From the collection site, from the eductor truck? Does this mean the eductor or street sweeper can discharge their load upgradient of the Runoff Treatment BMP??	Seattle
235	Appendix IV-B: Management of Street Wastes	Section: Street Waste Liquids, paragraph beginning "● Ecology must approve in advance flocculants for the pretreatment of catch basins decant liquids... ..." Suggested wording: "Ecology must approve in advance flocculants for the pretreatment of street waste liquids."	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
236	Appendix IV-B: Management of Street Wastes	Section: Site Evaluation Suggested clarification: Collection Site Evaluation	Seattle
237	Appendix IV-B: Management of Street Wastes	Section: Site Evaluation, paragraph beginning "3. A waste and container inspection before and during collection..." Suggested clarification: "3. sweeping route, catch basin, waste, and container inspection before and during collection..."	Seattle
238	Appendix IV-B: Management of Street Wastes	A statement about street waste regulation is wrong and probably was generalized from a SW rule draft that Ecology did not adopt. The final state rule does not "classify" that any waste type is contaminated soil. To match the 2018 final WAC 173-350-100 "contaminated soil" definition, please change p. 3 to read as follows: "The Solid Waste Handling Rule classifies <u>[[ADD]] states that "examples of potentially contaminated soil may include" Street Waste. [[STRIKE: as an "Impacted soil and Impacted sediment". By this, Street Waste is determined to contain one or more contaminants at concentrations above unrestricted screening levels, but it is not a dangerous waste.]]</u> "	Seattle
239	Appendix IV-B: Management of Street Wastes	Please delete a definition that is not in the final 2018 SW Rule: [[STRIKE: "Clean soils are defined as "soils and dredged material which are not dangerous wastes, contaminated soils, or contaminated dredged material ..." (WAC 173-350-100)."]]] Also, please review and correct all SWMMWW summaries about clean and contaminated soil, which Ecology has now chosen to define in the SW Rule in terms of "release" or where the soil is moved.	Seattle
240	Executive Summary of Volume V	It is confusing to not have the BMP numbers match the manual locations. Please consider renumbering BMPs to be consistent with location in the SWMMWW.	Seattle
241	I-4 UIC Program Administration and Design Guidelines	Draft UIC guidance became confusing and possibly overreaching when it was transferred from separate guidance to SWMMWW. Seattle recommends that Ecology remove Vol. I-4 from the SWMMWW and conduct separate UIC rulemaking to address any UIC program objectives. If not, then Seattle is available to discuss concerns and necessary redrafting for Vol. I-4.	Seattle
242	I-4 UIC Program Administration and Design Guidelines	Vol. I-4 is guidance, not a rule. It cannot create requirements. (State UIC requirements would be created in statute, rule, or UIC permit.) Instead, Ecology should amend its UIC rule if it wants legally to impose requirements on UICs, particularly new or revised requirements such as for deep UIC wells. Rulemaking would provide the necessary public notice and opportunity to comment on new generally applicable requirements. Without rulemaking, how and when would a UIC well applicant have notice and opportunity to appeal any new requirements Ecology placed into its UIC authorization based on draft Vol. I-4? This is especially unclear for "rule authorization" apparently based on guidance rather than a rule.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
243	I-4 UIC Program Administration and Design Guidelines	Revise Vol. I-4 to clarify its limited legal authority regarding MS4 permits. The UIC program has no authority to add to an MS4 permit or bootstrap SDWA UIC program requirements. MS4 Permits explicitly do not authorize UIC wells and have separate legal authority. (Permit S2.A.1; Fact Sheet at 6.2 for S2)	Seattle
244	I-4 UIC Program Administration and Design Guidelines	Clarify special provisions for MS4s. Vol. I-4 is inconsistent as to what parts address stormwater UIC wells generally (apparently most) vs. address only UICs wells operated by MS4 jurisdictions (apparently very little, as was true for the previous guidance). Please clarify. For example, I-4.2, from start through first four bullet points, appears to be section specific to an MS4's own wells. This was clearer in the 2006 guidance. Please note that in the 2006 UIC guidance, Sec. 2.7 is the only part specific to discharges to UIC wells by a municipality under an MS4 Permit. Therefore please reinsert the 2006/2.7 language but also delete within it the inaccurate sentence beginning, " Since the NPDES Permit does not fulfill all the requirements of the UIC program, the following must be added to the jurisdiction's Stormwater Management Program (SWMP) and implemented: " and states instead, " <u>The municipality must comply with the UIC Rule for its UIC wells, as follows:</u> " This change states Ecology's intent and avoids implying that UIC guidance can be used direct the contents of an MS4 Permit/SWMP.	Seattle
245	I-4 UIC Program Administration and Design Guidelines	Remove all draft SWMMWW language that is contrary to the UIC rule (WAC 173-218), or exceeds authority granted by the rule. For example, without rulemaking Ecology cannot alter this special allowance for MS4 jurisdiction's own new UIC wells per the final UIC rule at WAC 173-218-090(1)(c)(i)(C) (added in final WSR 06-02-065, 2/3/2006): " <i>Owners and operators of [MS4s] regulated under [1342(p) FWPCA] which also own or operate Class V UIC wells may satisfy the presumptive approach by applying the stormwater management programs developed to comply with the [FWPCA] to their new UIC wells. For new UIC wells, construction phase and postconstruction stormwater controls must be applied in accordance with applicable stormwater manuals.</i> " As Vol. I-4 is now drafted, it is not clear what Ecology intends.	Seattle
246	I-4 UIC Program Administration and Design Guidelines	The same changes re UICs are suggested for the SWMM for Eastern Washington.	Seattle
247	IV-1 Source Control BMPs Applicable to All Sites	General comment for Vol. IV: The layout of BMPs is not consistent. Subheadings include "Applicable Operational BMPs", "Applicable BMPs", "Recommended Applicable BMPs", etc. Some BMP bullet items that are identified as "Applicable" are just suggestions and should be included in "Recommended BMPs". Also, the greatly expanded BMPs are beyond what would be required for <i>all</i> sites or properties in a jurisdiction and may be intended for commercial for industrial sites (Ex. BMP S455); please clarify what Ecology means by "[SC] BMPs Applicable to All Sites."	Seattle
248	IV-1 Source Control BMPs Applicable to All Sites	Where it states in this document to comply with the Uniform or International Fire Code change this to read, "local applicable fire code."	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
249	IV-1 Source Control BMPs Applicable to All Sites	The applicability of Source Control BMPs appears to be expanded. Please add the following back from the 2014 SWMMWW: " <u>Local governments may require commercial, industrial, and multifamily properties to use the source control BMPs in this volume through ordinances or other documents.</u> " Currently, as written, it appears, for example, that "Employee Training" & "Record Keeping" applies to a single-family home.	Seattle
250	Glossary	The Glossary has added a new definition, "New Impervious Surface". The definition includes, "A surface that is upgraded from a bituminous surface treatment ("chip seal") to asphalt or concrete". Bituminous surface treatments such as chip seal already meet the definition of an "Impervious Surface" and should not be counted as a "New Impervious Surface".	Seattle
251	III-2.2 Continuous Simulation Models	The draft SWMMWW does not allow the use of MGS Flood, but states that Ecology is working with the vendor to include MGS Flood as well as Western Washington Hydrology Model (WVHM) as an Ecology Approved Continuous Simulation Model. Seattle strongly supports making MGS Flood an approved model. MGS Flood performs computations significantly faster than WVHM which greatly reduces consultant costs during design. Seattle encourages Ecology to engage Permittees and the consulting community, if necessary, so that both MGS Flood and WVHM are approved models.	Seattle

City of Seattle - Phase 1 Formal Draft Comments

#	Document	Section	Page	Comment
1	Phase I	Controlling Runoff (WWA)	16-18 of 72	<p>S5.C.5.b.i-iv, with App. 10.</p> <p>Permittees have questions because the 2018 draft, S5.C.5.b.iii (with App. 10), requires Phase I permittees to make some, not all, of the changes Ecology has included in the draft SWMMWW. For example, App. 10 does not list, so S5.C.5.b.ii does not require, new source control BMPs that are in the draft SWMMWW. This differs from the current (2007, 2013) permit structure; Ecology in the past has reviewed the complete set of Phase I program changes (local codes, rules) and approved when equivalent. This allows MS4 municipalities to rely on Phase I programs. (S5.C.5.b.ii.)</p> <p>Thank you for Ecology staff’s clarifications during the 10/9 public workshop that</p> <ul style="list-style-type: none"> (1) A Phase I permittee will remain in compliance with the 2019 Permit when the permittee maintains its approved equivalent program and makes only the changes listed in App. 10, and (2) Phase I permittees also have the option to make additional changes toward equivalency with the 2019 SMWWMM beyond those listed in App. 10. Ecology agrees to review for approval the changes that permittee makes, when submitted in the form Ecology describes in App. 10. <p>Because Ecology has chosen this approach, please also alter the Permit to state that Phase I permittees remain in compliance when they follow Ecology’s new direction. Text is provided below.</p> <p>It would be unacceptable if Ecology, instead, intends to change the Manual and shift a burden to Phase I permittees to prove AKART and equivalency with the 1000+ page SWMMWW without Ecology review of new Manual provisions.</p> <p>Seattle is available to meet to discuss how to resolve this important point to achieve all goals.</p>

#	Document	Section	Page	Comment
2	Phase I	Controlling Runoff (WWA)	16-18 of 72	<p>Please add text at the end of S5.C5.b.ii as follows:</p> <p>“...Permittees who choose to use the requirements, limitations, and criteria in the Stormwater Management Manual for Western Washington (SWMMWW), or an equivalent manual approved by Ecology, may cite this choice as their sole documentation to meet this requirement. <u>[[ADD]] Permittees listed in Appendix 10, Part 1, may cite as their sole documentation to meet this requirement the equivalent manual approved and listed in Appendix 10, Part 1, plus only those approved revisions to the sections specifically required by S5.C.5.b.iii and listed in Appendix 10, Part 2.</u></p> <p>Please edit S5.C5.b.iii as follows:</p> <p>“The Permittee shall submit draft enforceable requirements, technical standards and manual <u>[[ADD]] excerpts</u> that correspond to updates identified in Appendix 10, Part 2 to Ecology no later than July 1, 2020. <u>[[ADD]] Permittee has the option to submit additional draft enforceable requirements, technical standards and manual excerpts.</u> Ecology will review and provide written response to the Permittee. If Ecology takes longer than 90 days to provide a written response, the required deadline for adoption and effective date will be automatically extended by the number of calendar days that Ecology exceeds a 90-day period for written response.</p> <p>a) Ecology will limit its review to those sections of the program <u>[[ADD]] that the permittee submits to Ecology</u> [[STRIKE listed Appendix 10, Part 2. The Permittee shall provide the section of the 2019 SWMMWW or Appendix 1 and the corresponding section of the proposed program they are seeking equivalency to (]] in the format described in Appendix 10.</p> <p>i) If the permittee proposes a new section not found in the SWMMWW (e.g. a new proposed BMP), then the Permittee shall submit a technical memo describing the rationale, tests, and documentation to demonstrate that the proposal meets AKART and MEP. [[STRIKE Incomplete submittals will not be reviewed.]] “</p> <p>Please edit S5.C5.b.iv as follows:</p> <p>“iv. No later than July 1, 2021, each Permittee shall adopt and make effective a local program that meets the requirements in S5.C.5.b.i through ii, above.</p>
3	Phase I	Controlling Runoff (WWA)	17 of 72	<p>S5.C.5.b.iii(a)(i). As above, Strike “incomplete submittals will not be reviewed”; Ecology has chosen to write a prescriptive MS4 permit, and therefore must (1) make the Permit requirements clear (which “incomplete” is not), and review for approval the materials that Phase I permittees submit to meet permit requirements.</p>
4	Phase I	Controlling Runoff (WWA)	18 of 90	<p>S5.C.5.a.i-vi Include definition of "started construction" from 2013 Permit. It appears to inadvertently have been removed, as Ecology acknowledge during public meeting.</p>

#	Document	Section	Page	Comment
5	Phase I	Controlling Runoff (WWA)	18 of 90	S5.C.5.a.i-vi. For the definition of "started construction", add to permit language further clarification of what is meant by "utility installation". For example, does only installing a gas service line count as "utility installation" and thus mean "started construction"? Perhaps Ecology means: "At a minimum, adequate water, sewer, and drainage utilities necessary to serve the development."
6	Phase I	Comprehensive Stormwater Planning (WWA)	20 of 72	<p>S5.C.6.b.i (new WS planning section). Please state the LID requirement more carefully. Please clarify that, as stated at the 10/11 public workshop, Ecology does not intend for Permittees to engage in a second review and revision process similar to that required in the 2013 Permit. Also, "as needed" places an uncertain obligation on permittees.</p> <p>S5.C.6... b. Low impact development code-related requirements.</p> <p>i. Permittees shall continue to update and revise development-related codes, rules, standards, or other enforceable documents [[ADD]] if permittee determines revision is [[STRIKE-as]] needed to incorporate and require LID principles and LID BMPs. The intent of [[ADD]] any [[STRIKE the review and]] revisions shall be to make LID the preferred and commonly-used approach to site development. [[ADD Any revisions]] [[STRIKEThe local development related codes, rules, standards, or other enforceable documents]] shall be designed to minimize impervious surfaces, native vegetation loss, and stormwater runoff in all types of development situations.</p> <p>(a) Annually, each Permittee shall assess and report any newly identified administrative or regulatory barriers to implementation of LID Principles or LID BMPs and measures to address the barriers since local codes were updated in accordance with the 2013-2019 Permit cycle. The report shall also describe mechanisms adopted to encourage or require implementation of LID Principles or LID BMPs.</p>
7	Phase I	Structural Stormwater Controls (PH I)		<p>Seattle shares with Ecology and other stakeholders a vision of a healthy Puget Sound region. S5.C.7 Structural Stormwater Control is an important element of a Permittee's SWMP, and Seattle has invested millions of dollars in recent CIP projects and Seattle's Street Sweeping for Water Quality Program to address high priority stormwater impacts to receiving waters.</p> <p>In concept, Seattle supports the development of a defined level of effort for S5.C.7 Structural Stormwater Controls to document a Permittee's progress on this requirement. However, Seattle continues to recommend that Ecology not include a defined level of effort in the 2019-2024 Permit. The S5C7 requirements need further input and development prior to having a defined level of effort because the S5C7 point system and environmental outcomes are currently not sufficiently aligned. As a result, stormwater managers may be put in the position where they need to prioritize getting "points" over directing investments for the highest priority environmental outcomes (see roadway example below). That being said, Ecology's proposed "ramp-up" approach to the required points during the 2019 permit cycle reduces the risk that the point system will significantly drive Phase I priorities during the 2019 permit cycle. However, in future permit cycles (once the ramp-up period is over), the risk is likely to increase significantly.</p>

#	Document	Section	Page	Comment
8	Phase I	Structural Stormwater Controls (PH I)		<p>Regardless of whether a defined level of effort is included in the 2019 permit, Seattle continues to recommend that a facilitated scientific and stakeholder process be undertaken during the 2019 permit term to recommend to Ecology an improved, robust framework for a defined level of effort in future permits.</p> <ul style="list-style-type: none"> · The scientific and stakeholder process would develop recommendations to improve S5.C.7 requirements to better direct millions of dollars of investments to the highest priority environmental outcomes. The process would gather and evaluate local, regional, and national scientific information on the performance and benefits of different structural stormwater control project types in different environmental settings (e.g., urban vs. rural) and gather regional stakeholder input. · This process needs funded technical support and be facilitated because it is a challenging task. 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. The technical and facilitation support could follow the highly successful model Ecology used to formulate LID requirements during 2009-2010 and could be funded by SAM Effectiveness Monitoring funds collected under the MS4 Permits.
9	Phase I	Structural Stormwater Controls (PH I)		<p>Seattle’s specific comments on the draft permit are limited to the three changes below because Seattle believes that the framework needs to be looked at holistically by multiple stakeholders, not piecemeal, to avoid unintended consequences that might make the framework less aligned with environmental outcomes.</p> <p>1. For the purpose of calculating Incentive Points, Ecology should provide an alternative to the SWMMWW flow control standard for urban creeks that have had at least 40% total impervious area (TIA) since 1985 by allowing the use of an equivalent Ecology approved manual. Without this, it appears that flow control projects in Seattle’s major creeks would not receive any points because the required flow control standard in Permit Appendix 1 is “match existing” for creeks in 40% TIA areas. In the “Phase I Municipal Stormwater Permit Guidance for Structural Stormwater Control Program: Guidance for Special Condition S5.C.7 and Appendix 12”, the following text should be added to Step 2 of the Flow Control (MR#7) Benefit Ratio and Equivalent Area Process (p. 10). Please add the underlined text as described below:</p> <p>“Use an approved continuous simulation model, to 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) for the full basin.”</p>

#	Document	Section	Page	Comment
10	Phase I	Structural Stormwater Controls (PH I)		2. If Ecology intends to include a defined level of effort in the 2019 Permit, a 4.5-year Performance period is recommended, rather than the proposed 3.5-year Performance Period. Due to annual reporting requirements, the same information will be available to inform next Permit requirement a year prior to Permit reissuance whether a 3.5-year or 4.5-year Performance Period is stipulated. Given that, a 4.5-year Performance Period is more reflective of performance during the 5-year permit period.
11	Phase I	Structural Stormwater Controls (PH I)		3. For 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 as an Appendix. See <u>Puget Soundkeeper Alliance, et al., v. Ecology, et al.</u> , 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)”). It would be insufficient to include Permit requirements, or key details that support the requirements, in a free-standing document or a Fact Sheet.
12	Phase I	Structural Stormwater Controls (PH I)		For Ecology reference, some examples of where the current framework is not robust enough for prioritizing projects (especially once the “ramp-up” period is over) that Seattle is not making specific recommendations on at this time include: <ul style="list-style-type: none"> · 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, 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 same number of points are awarded to a one-acre roadway project that provides enhanced treatment whether the roadway is a rarely travelled roadway in a rural area or an arterial in an industrialized urban area. Although both projects receive the same points, the industrial roadway project most likely has a greater environmental benefit but is also likely to cost significantly more. A stormwater manager faced with limited funding may be forced to prioritize the rarely travelled rural roadway project to get points to meet S5C7 requirements.
13	Phase I	Source Control Program (WWA)	23 of 72	S5.C.8.b.i. See comment about S5.C.5.b.i-iv. Change to read as follows: “The requirements of this subsection are met by using the source control BMPs in Volume IV of the Stormwater Management Manual for Western Washington, or a functionally equivalent manual approved by Ecology <u>[[ADD]] and listed in Appendix 10, Part 1, with no additional changes required for equivalency.</u> ”

#	Document	Section	Page	Comment
14	Phase I	Source Control Program (WWA)		<p>– Source Control Updates - At Phase I Permit S5.C.8.b.i, please include the same footnote about Ecology’s review of revisions, as Ecology has added to S5.C.10.a (O&M), so that S5.C.8.b.i reads as follows:</p> <p>“... Permittees shall update and make effective the ordinance(s), or other enforceable documents, as necessary to meet the requirements of this section no later than August 1, 2021. <u>[INSERT FOOTNOTE NUMBER]</u> ...</p> <p>... AND ADD FOOTNOTE TEXT: <u>“If Ecology takes longer than 90 days to provide a written response as outlined in S.5.C.5.b.3, the required deadline for adoption and effective date will be automatically extended by the number of calendar days that Ecology exceeds a 90 day period for written response.”</u></p>
15	Phase I	Source Control Program (WWA)		<p>At Phase I Permit S5.C.8.a.ii and -b.ii, please correct typo: Substitute “<u>publicly</u>” for “publically.”</p>
16	Phase I	Source Control Program (WWA)		<p>Please restore clear direction for MS4 permittees about which commercial and industrial “pollutant generating sources” and which BMPs Ecology intends that Phase I Permit requires to be part of local regulation under S5.C.8.b.1. It is difficult to tell because of the way Ecology proposes to rewrite the SWMMWW.</p> <ul style="list-style-type: none"> • Phase I Permit S.5.C.8.b.1 states, “<i>Operational source control BMPs shall be required for all pollutant generating sources. ...</i>” This does not clearly indicate which are the “pollutant generating sources” for which the Permit requires local jurisdictions to regulate using BMPs, plus which BMPs. (See page 32 of 90 in redline draft Phase I Permit: https://fortress.wa.gov/ecy/ezshare/wq/permits/PhIPermitRedline.pdf) • Currently, the SWMMWW explains applicability of BMPs to commercial and industrial sources -- for example, see 2014 SWMMWW, Vol. IV-1 and IV-2, esp. -2.1 and -2.2, and elsewhere. • But in contrast, draft SWMMWW Vol. IV only states this: “... IV-1 Source Control BMPs Applicable to All Sites through IV-7 Other Source Control BMPs provide BMPs grouped by types of activities that have the potential to produce pollution.” (from Executive Summary of Vol. IV, draft SWMMWW (Source Control) Vol. IV.) Some BMPs are apparently required for “all sites” according to the title of in the 2018 draft SWMMWW at IV-1. • Where is the clear direction like 2014 SWMMWW as to which BMPs a Phase I MS4 must address in local regulation, and for which commercial and industrial sources?

#	Document	Section	Page	Comment
17	Phase I	IDDE		S5.C.9.g Recordkeeping. Seattle recommends the following changes: Each Permittee shall track and maintain records of the activities conducted to meet the requirements of this section [[ADD using either their own system or WQWebIDDE]]. In the Annual Report, each Permittee shall [[ADD use diligent efforts to]] submit data for all of the [[ADD suspected]] illicit discharges, including spills and illicit connections [[ADD ,]] that were found by, reported to, or investigated by the Permittee during the previous calendar year [[ADD ,to]] [[DELETE. The data shall]] include the information specified in Appendix 14 and WQWebIDDE. [[DELETE Each Permittee may either use their own system or WQWebIDDE for recording this data.]] [[ADD The information entered id the best available to the inspector at a point in time.]] Final submittal shall be compatible with and follow the format and data schema described in Appendix 14 and WQWebIDDE.
18	Phase I	Operations and Maintenance	29 of 7	S5.C.10.a. See comment about S5.C.5.b.i-iv. Change to read as follows: "No later than July 1, 2021 ² each Permittee shall update their maintenance standards as necessary to meet the requirements in this section [[ADD]] and for any manual approved by Ecology and listed in Appendix 10, Part 1, is not required to make additional changes to achieve equivalency.
19	Phase I	Education and Outreach		General Comment: Please select the term 'campaign' or 'program' and use consistently throughout. SPU prefers the term campaign because our E&O programs often consist of multiple campaigns.
20	Phase I	Education and Outreach	45 - S5.	C.11.a.ii. Based on the Ecology staff clarifications provided at the October 3, 2018 STORM conference, please add 'at least one' to the following language: 'Behavior change: To effect behavior change, Permittees shall target <u>at least one</u> of the following audiences and BMPs:'
21	Phase I	Education and Outreach	45 - S5.	C.11.a.ii.(b). Based on the Ecology staff clarifications provided at the October 3, 2018 STORM conference, please add 'at least one' to the following language: 'No later than July 1, 2020, each Permittee shall conduct a new evaluation of the effectiveness of <u>at least one</u> ongoing behavior change program...'
22	Phase I	Monitoring and Assessment		S8.B.3. The requirement to submit SWMP activities tracked and/or maintained should be limited to only data/information S5/9 requires the permittee to keep.
23	Phase I	Appendix 1		Items such as BMPs in Appendix 1 need to reference the SWMMWW as the references are not included within the Permit (e.g. BMP T7.30: Bioretention should be SWMMWW BMP T7.30 Bioretention)
24	Phase I	Appendix 1	13 of 47	Section 2 Definitions. Please clarify whether "light rail" is considered subject to regular use by "motor vehicles". Specifically, the definition of "Vehicular Use" does not include "light rail" in listing "subject to regular vehicular use".
25	Phase I	Appendix 1	13 of 47	Section 2 Definitions. Please clarify whether "heavy rail" is considered subject to regular use by "motor vehicles". Specifically, the definition of "Vehicular Use" does not include "heavy rail" in listing "subject to regular vehicular use".

#	Document	Section	Page	Comment
26	Phase I	Appendix 1	16 of 47	Section 3.1. Figure 1-4.2: Appears to be an error - Change first box from "impervious surface" to "hard surface" to match the definition of "redevelopment" on page 9 of 47.
27	Phase I	Appendix 1	20 of 47	Section 4.1. Per S5.C5.b.i, the Permittee is required to adopt Minimum Requirements, thresholds, and definitions in Appendix 1 that are determined to be equivalent by Ecology. Please specify the chapter and location of site plan guidance, as in previous SWMMWW, to provide the necessary certainty for Permittee requirements. Suggest this addition to the last sentence: "Stormwater Site Plans shall be prepared in accordance the guidance in <u>Chapter XXX of Volume III of the SWMMWW</u> ."
28	Phase I	Appendix 1	20 of 47	Section 4.1. In the last sentence of section 4.1, Change sentence to reference specific portion of the the SWMMWW: "Stormwater Site Plans shall be prepared in accordance with <u>[[ADD]Section I-3.4.1 of]</u> the SWMMWW."
29	Phase I	Appendix 1	28-30 of 47	Section 4.5. For Projects that choose to meet the LID Performance Standard, clarify throughout that: Both Flow Control BMP(s) <u>[[ADD] and LID BMP(s) (except for rain gardens)]</u> are allowed to meet the LID Performance Standard.
30	Phase I	Appendix 1		Section 3. It appears that Threshold Discharge Areas are the basis of the thresholds presented in Section 3. Therefore, consider removing the TDA discussions from MR 5, 6, 7, & 8 and instead explain in Section 3 that the basis of thresholds apply to TDA's. Also explain that TDA's apply to Figures 1-4.2 & 1-4.3. Having the TDA discussion repeated multiple times is confusing.
31	Phase I	Appendix 1		Section 2 Definitions. Also consider adding a reference to TDAs in the definition of "Project Site".
32	Phase I	Appendix 1	28-30 of 47	Section 4.5. In multiple locations for conciseness, instead of stating that a project can "Use any Flow Control BMPs desired to achieve the LID Performance Standard", please revert back to the current permit language that states that a project shall "Meet the LID Performance Standard". Then in the "LID Performance Standard" state how the performance standard can be met (i.e. use any "Flow BMP or LID BMP (except for rain gardens)").
33	Phase I	Appendix 1	28-30 of 47	Section 4.5. In the LID Performance Standard Section, state that any Flow Control BMP can be used to achieve the standard as well as LID BMPs (except rain gardens). Seattle assumes that other LID BMPs, such as Permeable Pavements and Downspout Full Infiltration can also be used in addition to Flow Control BMPs and Bioretention to meet the LID Performance Standard.
34	Phase I	Appendix 1	29 of 47	Section 4.5. Remove the statement "If the project can't meet the LID Performance Standard it must seek and be granted an exception/variance". Exceptions/Variations apply to more than MR#5. Additionally, the statement appears to obligate the Permittee to grant an exception. If the project proponent does not want to reserve a space for meeting the LID Performance Standard, but it is technically feasible, is that sufficient grounds for the Permittee to grant an exception/variance? Rewrite to avoid appearance that Ecology is directing local jurisdictions to issue an exception/variance. Either be silent about exceptions/variances in this section or rewrite as follows: " <u>Projects must either meet the LID Performance Standard, or seek and obtain an exception/variance.</u> "

#	Docu ment	Section	Page	Comment
35	Phase I	Appendix 1	35 of 47	Section 4.6. The new title "Runoff Treatment Performance Goal Thresholds" appears incorrect as this section is instead describing when certain treatment types are required (e.g. Oil Control). The "Performance Goals" are instead described within the SWMMWW. Consider changing the title of this section to: "Runoff Treatment Thresholds".
36	Phase I	Appendix 1	36 of 47	Section 4.6. The new sentence at the beginning of this section is ambiguous and appears to be adding new definitions. For example, what is meant by "sensitive to phosphorus" and "are being managed to control phosphorus". Please delete this new sentence.
37	Phase I	Appendix 1	37 of 47	Section 4.6. How should a Permittee determine if project site is a "Commercial project site"? For example, are public parks considered commercial?
38	Phase I	Appendix 1	28 of 47	Section 4.5: – Please list the Competing Needs Criteria in the Permit, rather than referring to SWMMWW as the section is currently drafted, just before Table 1-10.2. If Ecology refers to SWMMWW, include (as before) the specific section and date of version, to provide the necessary certainty to permittees as to which requirements apply.
39	Phase I	Appendix 1	35 of 47	Section 4.6: The qualifier, "Except as provided below,..." at the beginning of this section is confusing. Which exception is ECY referring to? It seems to be clearer to just state: "The Permittee must require Runoff Treatment BMPs in accordance with the following thresholds, standards, and requirements..."
40	Phase I	Appendix 1	40 of 47	Section 4.7: The qualifier, "Except as provided below,..." at the beginning of this section is confusing. Which exception is ECY referring to? It seems to be clearer to just state: "The Permittee must require Flow Control BMPs in accordance with the following thresholds, standards, and requirements..."
41	Phase I	Appendix 1	42 of 47	Provide SWMMWW volume and chapter location for figure "Basins with 40% Total Impervious Area as of 1985," to provide necessary certainty to Permittees."
42	Phase I	Appendix 1	various	As in previous versions, provide specific reference to SWMMWW, for example to read: "See <u>Volume XXX, Section XXX of the SWMMWW</u> for detail on how an Alternative Flow Control Performance Standard may be established." And "Flow Control BMPs shall be selected, designed, and maintained in accordance with <u>Volume XXX, Section XXX ... of the SWMMWW</u> or an approved equivalent."
43	Phase I	Appendix 1	45 of 47	Restore previous language to match common usage and a later portion of text; replace : "...a written finding of fact that documents..." with " <u>...written findings of fact that document...</u> "

#	Document	Section	Page	Comment
44		Appendix 1	various	<p>To provide adequate and legal notice, Ecology must identify any permit requirements in clear and certain terms, not by referring generally to a 1000+ page manual. Wherever the Permit refers to the SWMMWW, please reinsert the SWMMWW volume and section references that apply, as appears in current and past MS4 Permits. In App. 1, we appreciate several clear reference to specific BMPs, but in many other places, please specify as is true in the current Phase I Permit App. 1:</p> <ul style="list-style-type: none"> • Section 2 – Definitions - Reinsert the proper volume and section at the end of “Maintenance.” • Section 4.1, MR #1 - Reinsert the proper volume and section at the end regarding stormwater site plans. • Section 4.2, MR #2, under “Project Thresholds” – Reinsert the proper volume and section for Sediment and Erosion Control BMPs in Construction SWPPP. • Section 4.3, MR #3 - Reinsert the proper volume and section for Source Control BMPs. • Section 4.5, MR #5. Under “The List Approach” - Reinsert the proper volume and section for Competing Needs Criteria. • Section 4.6, MR #6, under “Water Quality Design Volume”– Insert the proper volume and section for Single Event Hydrograph Method. • Section 4.6, MR #6, under “Runoff Treatment BMP Selection, Design, and Maintenance” - Reinsert the proper volumes and sections in three places. • Section 4.7, MR #7 - Reinsert the proper SWMMWW location for the "Flow Control Exempt Receiving Waters" Appendix (in two places) and the figure "Basins with 40% Total Impervious Areas as of 1985". • Section 4.7, MR #7 – Insert the proper volumes and sections for establishment of the Alternative Flow Control Performance Standard and for selection, design, and maintenance of flow control BMPs. • Section 4.8, MR #8 – Insert the proper SWMMWW location for “Guidelines for Wetlands When Managing Stormwater Appendix” (in two places). • Section 7 – Insert the property SWMMWW location for basin plan examples.
45	Phase I	Appendix 1	27 of 47	<p>Section 4.3. Per S5.C5.b.i, the Permittee is required to adopt Minimum Requirements, thresholds, and definitions in Appendix 1 that are determined to be equivalent by Ecology. In Appendix 1, Ecology should explicitly call out which sections of the SWMMWW that must be adopted for equivalency.</p> <p>For example, Section 4.3 Minimum Requirement #3, should specify which portion of the SWMMWW shall be adopted for equivalency (i.e. Volume IV).</p>
46	Phase I	Appendix 1		In general, open-ended references to the SWMMWW should be minimized or eliminated because they add uncertainty to the Permit.
47	Phase I	Appendix 1	28 or 47	Section 4.5. For section "Projects that Trigger Only Minimum Requirements #1 - #5", in first sentence insert "and" after exempt, to read "Projects that are not Flow Control exempt <u>and</u> that..."
48	Phase I	Appendix 1	7 of 47	Section 2 Definitions: Consider adding a definition for "Project" that means either "New Development" or "Redevelopment". For example, in Figure 1-4.2, is "Project" interchangeable with "New Development"?

#	Document	Section	Page	Comment
49	Phase I	Appendix 10	6 of 7	As noted in S5.C.5.b.iii(a)(i) comment, delete: [[STRIKE "Changes submitted without a technical memo will not be reviewed."]]
50	Phase I	Appendix 13 (WWA)	Table 1	There is a new Seattle-Owned basin on the West Side of the waterway. The name is Herrings House, Separated Stormwater Drainage Basin Area is 6.07 Acres, the Outfall Diameter is 30 inches, Effectiveness Monitoring Location is null, Sampling to Fill Data Gap is Yes
51	Phase I	Appendix 13 (WWA)	Table 1 & 2	1 st Ave. S (east) outfall that is currently listed in Table 1 should be 'outfall owned or installed by others' [WSDOT], thus moved from Table 1 to Table 2.
52	Phase I	Appendix 14 (PH I)		Seattle recommends the following changes: This is the complete list of information that [[DELETE all]] Permittees are required to use diligent efforts to report for each [[DELETE IDDE incident]] <u>[[ADD suspected illicit discharge, including spills and illicit connections, that were]]</u> found <u>[[ADD by]]</u> , reported to, or investigated by the Permittee. Each Permittee may either use their own system or the WQWebIDDE form for recording this data. If using your own tracking system, this information must be provided in an electronic format that follows the data schema provided at the end of this document and is easily transferred to a database. Ecology prefers a zipped .xml. An excel spreadsheet or space- or tab-delimited file that follows the data schema is acceptable. [[DELETE A complete report will]] <u>[[ADD Each permittee is to use diligent efforts to]]</u> include a separate entry (even if left blank) for every line below and [[DELETE must]] <u>[[ADD to]]</u> use the precise verbiage and spelling below. For all incidents where the answer to #7 is no, #8 is required but #9-15 are not required. Each field that ends in a colon (":") is followed by a text answer. All dates are in MM/DD/YYYY format.
53	Phase I	Appendix 14 (PH I)		Overall Comment – The requirement to translate the data detailing over 1,000 IDDE Investigations that Seattle Public Utilities (SPU) performs annually is a significant task. To adapt the data being collected into the specific terms and schema being proposed will require the creation of a translation tool as well as potentially requiring changes to the newly created MS Dynamics database that was put into service in July 2018 after nearly 2 years of development. The work required will need to be handled as an IT Project and will require project planning, development, and testing time.
54	Phase I	Appendix 14 (PH I)		WQWebIDDE Schedule It is not appropriate to begin an IT project based on draft permit requirements so the earliest reasonable time to be initiated would be August 2019. It is very likely that developing and executing this work would not happen in time to perform the 2019 Annual Electronic Submission (March 2020). The current SPU database can export data but it would not follow the schema nor use the specific terms so any submission prior to project completion would have limited utility; approximately 20% to 40% applicability. Necessary work and modifications to the existing database necessitates first submission required under the new system would be scheduled for the report that covers the 2020 reporting year.

#	Docu ment	Section	Page	Comment
55	Phase I	Appendix 14 (PH I)		SPU's IDDE data collection system has been refined to collect the most applicable data for Seattle incidents. Data translated into the WQWebIDDE would be of reduced detail.
56	Phase I	Appendix 14 (PH I)	1	#6 - The "Transferred to another party?" choice should allow for more than one party since it is possible to transfer an investigation to two or more agencies.
57	Phase I	Appendix 14 (PH I)	1	On #6 the "Transferred to another party" question and the "Referred to other agency or department" field found in #14 are similar. Please provide clarification for applicable uses of these two fields.
58	Phase I	Appendix 14 (PH I)	1	#7 - For the "Estimated Volume" field, please break up the choices into groupings such as <5, 5-50, >50-500, >500-2,000, and >2,000 (or some other sensible number of choices)
59	Phase I	Appendix 14 (PH I)	3	#8 - What is intended to be recorded in the category of "Other MS4"? Please provide clarification for applicable uses of this field.
60	Phase I	Appendix 14 (PH I)	3	#10 - Seattle uses a single field for street addresses or intersection type addresses. Will submitting an intersection or narrative address into the "Street" field result in a data miss-match? Recommend adjusting the "Street" field to receive a variety of location descriptions.
61	Phase I	Appendix 14 (PH I)	3	#11 - Is "Unconfirmed" the same as "None found"? Please provide clarification for applicable uses of these two choices.
62	Phase I	Appendix 14 (PH I)	3	#11 - Why are there choices like "Unconfirmed" and "None found" if you exit the process at #7 when you pick "No problem found"?
63	Phase I	Appendix 14 (PH I)	5	#12 - Why is "Allowable discharge" a required reporting category? Please provide clarification for applicable uses of this field.
64	Phase I	Appendix 14 (PH I)	6	#12 - The choice "Broken or clogged water or sewer line" should be changed into two choices since water line issues are different than sewer ones.
65	Phase I	Appendix 14 (PH I)	8	#15 - These can be extremely lengthy and not always suited to a plain text field. Please provide additional clarification regarding how this field is intended to be used.
66	Phase I	Appendix 14 (PH I)	8	#15 - Please provide additional clarification regarding unresolved/ongoing inspections. Seattle requests that entries not be required to be updated beyond one month of intake time and be left as a new choice called "Ongoing" in #14 for those with extended enforcement periods. A requirement to perpetually update long running enforcement cases is a burden.
67	Phase I	N/A		FACT SHEET Fact Sheet overall: Concerned that meaning has been lost for the Phase I Permit by combining the two fact sheets into one. At minimum, when a FS section relates only to Phase II, please revise the Fact Sheet to state that in the Permit section title and include the Phase-II only Section number. The comments have not indicated each instance, but for example: 6.1.3, 6.1.4, 6.1.5, and 6.1.6 all appear to relate to Phase II only and all refer S1 Permit sections that do not match the text in the Phase I Permit.

#	Document	Section	Page	Comment
68	Phase I	N/A		FACT SHEET p. 29 at 4.1: Restore parts of the 2011 Fact Sheet language for accuracy, to read: “In Washington State, a wide range of industrial facilities listed at 40 CFR 122.26(b)(14) must obtain [ADD NPDES permits from Ecology, in most cases] coverage under Ecology’s Industrial Stormwater General Permit, [DELETE which authorizes] [ADD to authorize] discharges to surface waters or to MS4s that discharge to surface waters....”
69	Phase I	N/A		FACT SHEET. p. 33 at 6.1.2: Please consider restoring most of the Phase I Permit 2011 FS text about coverage and permittees, which is accurate and complete and contains important information. If not, then it is necessary to add “may” to read: “The areas covered by the permit [ADD <u>may</u>] include the entire incorporated area of a city....” Reason: Inaccurate. Permit coverage is only for “discharges from” the MS4, not direct discharges or combined sewer areas.
70	Phase I	N/A		FACT SHEET p. 34 at 6.1.3 – Delete “Phase I and” in second full paragraph, to read, “For [DELETE-Phase I and] Phase II counties, the Permits cover the urbanized area, or census-defined urban area, that extends....” Reason: Inaccurate. The maximum MS4 area for Phase I counties is based on jurisdictional boundaries, not census-defined urban status like Phase IIs.

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
1	(General Comment)	Ecology must give clear notice to permittees of what parts of the SWMMWW are required by the Permit. (See similar comment for the Permit and its Appendix 1.) Please accurately summarize how the manual is used in the MS4 Permit.	Seattle
2	I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	In the "Additional Guidance for Element 1", the guidance states that "Plastic, metal, or fabric fence may be used to mark the clearing limits". Add language that allows additional options, such as walls or buildings, as long as they provide an equivalent level of protection.	Seattle
3	I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	In the "Additional Guidance for Element 7", clarify what "adequate treatment" means.	Seattle
4	I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	Element 10, Control Dewatering, does not mention the tanks (e.g. Baker tanks) that are commonly used for temporary storage and sedimentation. They should be included in the list of "Other dewatering treatment or disposal options may include:". Also, under the third bullet, add "Temporary storage and onsite treatment may be required for small urban lots, or where infiltration is infeasible".	Seattle
5	I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	Element 10, Control Dewatering. Add a bullet in the Additional Guidance section that addresses discharges from contaminated sites (e.g. Guidance for Remediation of Petroleum Contaminated Sites).	Seattle
6	I-3.4.2 MR2: Construction Stormwater Pollution Prevention Plan (SWPPP)	Element 4: What amount of vegetative cover is needed for full stabilization? How established should the vegetation be?	Seattle
7	I-3.4.3 MR3: Source Control of Pollution	Move section "Identifying Source Control Strategies in a Basin Plan. It is confusing to have Basin Plan verbiage in multiple locations in the SWMMWW.	Seattle
8	I-3.4.5 MR5: On-Site Stormwater Management	In Competing Needs Criteria, revert to the original text, to eliminate unintentional changes in meaning that occurred during Ecology's technical edit. Sentence must read, like 2014 updated Manual: " <u>Where a LID requirement has been found to be in conflict with special zoning district design criteria adopted and being implemented pursuant to a community planning process, the existing local codes may supersede or reduce the LID requirement.</u> "	Seattle
9	I-3.4.5 MR5: On-Site Stormwater Management	Reconstruct and insert the original list of laws because the link in the draft is broken: "Historic Preservation Laws and Archaeology Laws as listed at http://www.dahp.wa.gov/learn-and-research/preservation-laws... " Including website links in the MS4 Permits fails to give permittees the necessary certainty as to permit requirements.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
10	I-3.4.6 MR6: Runoff Treatment	Contrary to the MR6 box in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: <i>"Projects shall employ Runoff Treatment BMPs in accordance with the following thresholds, standards, and requirements to remove pollutants from stormwater runoff."</i>	Seattle
11	I-3.4.6 MR6: Runoff Treatment	Contrary to the MR6 box in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: <i>"Size Runoff Treatment BMPs to treat the Water Quality Design Flow Rater or Water Quality Design Storm Volume...."</i>	Seattle
12	I-3.4.6 MR6: Runoff Treatment	Move section "Revising MR6 through Basin Plan" to Appendix I-B: Basin Plans. It is confusing to have Basin Plan verbiage in multiple locations in the SWMMWW.	Seattle
13	I-3.4.7 MR7: Flow Control	Contrary to the MR7 box in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: <i>"Projects shall employ Flow Control BMPs in accordance with the following thresholds, standards, and requirements to reduce the impacts of stormwater runoff from hard surfaces and land cover conversions."</i>	Seattle
14	I-3.4.7 MR7: Flow Control	Contrary to the MR7 box in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: <i>"Flow Control BMPs shall be selected, designed, and maintained in accordance with this manual"</i>	Seattle
15	I-3.4.7 MR7: Flow Control	Move section "Revising MR7 through Basin Plan" to Appendix I-B: Basin Plans. It is confusing to have Basin Plan verbiage in multiple locations in the SWMMWW.	Seattle
16	I-3.6.1 Adjustments to the MRs	Contrary to the box under Section I-3.6.1 in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: <i>"Adjustments to the Minimum Requirements may be granted prior to permit approval...drainage manual admistractor..."</i> "Drainage Manual Administrator" is not a Permit term.	Seattle
17	I-3.6.2 Exceptions/Variances to the MRs	Contrary to the box under Section I-3.6.2 in Manual draft, unable to locate the following text in either the Phase I/II MS4 App. 1 or the Construction SG Permit: <i>"Exceptiona/variances (exceptions) to the Minimum Requirements...drainage manual administrator..."</i> "Drainage Manual Administrator" is not a Permit term.	Seattle
18	BMP D.1: Detention Ponds	The detention pond section should be shortened and cross referenced to wet ponds for all similar criteria and constraints - Many of the basic siting issues, access issues, safety issues and empoundment are similar across the wetpool and detention pond BMPs. It is not helpful to have such differing descriptions or requirements for similar features, including dam safty references.	Seattle
19	BMP D.1: Detention Ponds	Emergency Overflow Spillway Capacity should be moved to the hydraulic structures section since it is common to multiple BMPS.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
20	BMP T5.13: Post-Construction Soil Quality and Depth	Clarify in the Runoff Model Representation if vegetated areas that are protected and do not require amendment can also be modeled as "pasture".	Seattle
21	BMP T5.15: Permeable Pavements	Runoff Model Representation: WWHM 2012 has a Permeable Pavement element, but the Runoff Model Representation directs the use of the Gravel Trench Beds. Clarify whether the use of these elements is interchangeable or if using the WWMH Permeable Pavement element is not permitted.	Seattle
22	BMP T5.30: Full Dispersion	Request additional guidance/requirements for pathways in parks to achieve Full Dispersion. Pathways in parks do not fit into the "Residential" or the "Roadway" categories included in this BMP but are some of the most likely surfaces to be dispersed. How much flowpath across parks lawn would be required to fully disperse a pathway/walkway?	Seattle
23	BMP T7.30: Bioretention	Mulch layer - this section specifies that coarse mulch shall be used. Seattle has found that coarse mulch as too much plastic and now specifies medium compost	Seattle
24	BMP T7.30: Bioretention	Modeling - Seattle has many cells with side slopes of 2.5:1, which is steeper than the minimum 3:1 side slope that ECY states can be modeled allowing side slope infiltration. Seattle sees significant infiltration through 2.5:1 side slopes and believes modeling of infiltration through side slopes at 2.5:1 should be allowed.	Seattle
25	I-1.5 Types of Best Management Practices (BMPs) for Stormwater Management	The 2nd to last paragraph implies a stepped requirement " and contains direction that should be in a permit, and not be in the SWMMWW. Different permits will have different requirements. Please delete sentence: "If it is found that...beneficial uses are still impaired..., additional controls may be required."	Seattle
26	I-1.5 Types of Best Management Practices (BMPs) for Stormwater Management	Consider defining LID BMP in the list of types. Other BMP types are somewhat self-explanatory; it is not clear if LID is an undefined acronym.	Seattle
27	I-1.5 Types of Best Management Practices (BMPs) for Stormwater Management	The new "Hydroperiod Protection Guidelines for Wetlands" should be included in the list of quantifiable methods used to prevent adverse impacts (in addition to Flow Control, Runoff Treatment, and Source Control)	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
28	I-2.14 Underground Injection Control (UIC) Program	Bioretention with collection underdrains are not considered UICs by the Washington Administrative Code, so they must not be considered UICs here or elsewhere in the SWMMWW. In definition, please delete the text that is not in the WAC 173-218-030 definition of UIC: "... which includes perforated pipes, drain tiles or other similar mechanisms." Please insert after the list, all of WAC 173-218-050, or at minimum the following: "The following are not considered UIC wells and are not regulated under this chapter. ...(5) Storm drain components that contain perforated pipes, drain tiles or other similar mechanisms designed and intended to convey water directly or indirectly to a surface water body." Bioretention with an underdrain meets WAC 173-218-050(5) and is collecting water out of the cell after it has been treated, thus reducing the water that enters groundwater. The SWMMWW text appears to be an error; if intentional by Ecology, this would be a significant change contrary to state rule and would place an unnecessary burden on the applicant and discourage use of an important LID BMP.	Seattle
29	I-2.15 Other Requirements	Remove first bullet under federal SPCC regulations. SPCC regulations no longer have the 660 gallon threshold.	Seattle
30	I-2.3 The Action Agenda for Puget Sound	Determine Organics and Bacterial Reductions by Treatment Best Management Practices bullet, possible typo: polycyclic aromatic hydrocarbons instead of "polyaromatic"	Seattle
31	I-2.4 Phase I and Western Washington Phase II Municipal Stormwater Permits	Suggest a correction to the statement of law: "Ecology is a delegate authority of the NPDES permit program by the Environmental Protection Agency (EPA), ..." should be "Ecology has authority delegated under the NPDES permit program by the Environmental Protection Agency (EPA), ..."	Seattle
32	I-2.6 Industrial Stormwater Permits	Suggest a correction to the statement of law: "Ecology is a delegate authority of the NPDES permit program by the Environmental Protection Agency (EPA), ..." should be "Ecology has authority delegated under the NPDES permit program by the Environmental Protection Agency (EPA), ..."	Seattle
33	I-2.7 Construction Stormwater General Permit	Suggest a correction to the statement of law: "Ecology is a delegate authority of the NPDES permit program by the Environmental Protection Agency (EPA), ..." should be "Ecology has authority delegated under the NPDES permit program by the Environmental Protection Agency (EPA), ..."	Seattle
34	I-3.1 Introduction to the Minimum Requirements	Consider adding TDA discussion to this section and/or reference TDAs in this section instead of repeating multiple times in MRs. Similar comment for Appendix 1 to Permit.	Seattle
35	I-3.3 Applicability of the Minimum Requirements	Step 1 to determine whether discharge is to a UIC well is out of order since that determination cannot usually be made until after TDA delineation and BMP selection.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
36	I-3.3 Applicability of the Minimum Requirements	Under Item 3 (Delineate the Threshold Discharge Areas) add language referring to the definition of Threshold Discharge Area in the Glossary. The definition includes a Figure with examples, which is very helpful.	Seattle
37	I-3.3 Applicability of the Minimum Requirements	Language has been added that appears to state that flow control, runoff treatment, and wetlands protection are only required if the thresholds within a TDA within the project site are exceeded. Is this correct? In the previous SWMMWW, if the thresholds for flow control and runoff treatment are exceeded for the entire site, then the requirements apply to the entire site. Figures 1-4.1 and 104.2 should be revised to match the TDA language, as they appear to conflict with the added TDA language.	Seattle
38	I-4.11 Deep UIC Wells	This section introduces a new category of UIC Wells separate from what is covered under the UIC program and poorly defines what qualifies as a deep UIC. In addition, it appears to create new requirements that are much more substantial than what is required for a typical UIC well. For example, it requires submittal of a Landscape Management Plan to ECY. This seems like an undue burden when there are already requirements for stabilizing the site and providing water quality treatment. Additional requirements should not be added without proper rulemaking by Ecology.	Seattle
39	I-4.13 Classification of Vadose Zone Treatment Capacity	The paragraph following Table 1-4.3 states "Designers may use subsurface infiltration (UIC wells) to provide flow control of excess stormwater runoff for flows greater than the water quality design storm where pollutant concentrations...". This statement refers to excess stormwater runoff, which is different from how UICs are stated to be allowed in section 1-4.1	Seattle
40	I-4.6 Siting and Design of New UIC Wells	The section within Minimum Sizing Requirements for Rule-Authorization of New UIC Wells that describes how UIC wells can be used to provide Flow Control is unclear and seems to be missing some connecting and clarifying words	Seattle
41	I-C.2 Levels of Wetland Protection	Under "Level 1 Protection", introducing "Special Characteristics" without a minimum size (i.e. 1 acre) is problematic. The WA State Wetland Rating System already accounts for Special Characteristics when categorizing wetlands. Therefore, Item #1 of Level 1 Protection should be removed, and instead the first items should be: "1. A wetland rating of Category I or II. These wetlands provide a high level of many functions <u>and/or have special characteristics</u> ." See also the separate email Seattle sent to Ecology on 10/25/2018 re this concern and with suggested changes.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
42	I-C.2 Levels of Wetland Protection	<p>It appears that the intent of Level 3 Protection is to replace the 2014 Guide Sheet 2. As Seattle interprets, that guide sheet is used to determine if a wetland can be included as a treatment or FC facility, which is a different question than what level of Hydroperiod or Pollutant Protection is necessary when not including a facility within the wetland.</p> <p>Therefore, the criteria for designating the Level Protection criteria should be separate from determining whether a wetland can also be used as a facility. One of the concerns re the Level 3 Protection is determining whether or not there is a breeding population of native amphibian species even if the wetland is excluded from being used as a part of a treatment or FC facility. See also the separate email Seattle sent to Ecology on 10/25/2018 re this concern and with suggested changes.</p>	Seattle
43	I-C.2 Levels of Wetland Protection	<p>Seattle has concerns about introducing thresholds outside of the Wetland Rating System, including determining Level 1 protection as it relates to Special Characteristics regardless of the size of the special characteristic (e.g. bog wetland at 100 sf). Seattle believes that the Wetland Rating system adequately captures Special Characteristics by assigning a minimum size for a special characteristic. See also the separate email Seattle sent to Ecology on 10/25/2018 re this concern and with suggested changes.</p>	Seattle
44	I-C.3 General Wetland Protection Guidelines	<p>Item 4: consider changing "exotic plant species" to "native and invasive plant and animal species". The term 'exotic' is inconsistent with currently used terminology; also, the draft language should include both plants and animals.</p>	Seattle
45	I-C.5 Hydroperiod Protection Guidelines for Wetlands	<p>Vegetation Richness Criteria Group (Veg), Item 6: not clear. Consider changing "Alterations to watershed and wetland hydrology that may cause perennial wetlands to become vernal post-project must be avoided" to "Alterations to watershed and wetland hydrology that may cause perennially wet wetlands to become vernal moist post-project."</p>	Seattle
46	I-C.5 Hydroperiod Protection Guidelines for Wetlands	<p>Making hydroperiod requirements that include year-long measurement of the Water Level Fluctuation for a wetland located offsite from proposed development is problematic for applicants (e.g. offsite costly survey/monitoring, access to multiple other private properties). It is understood that the 2014 guidelines can still be used, but Seattle is concerned that the proposed requirements in the current draft may be the only available standard in the future. Please reconsider this requirement for wetland's that are not located within the project site or scale of project discharging to a given wetland.</p>	Seattle
47	I-C.5 Hydroperiod Protection Guidelines for Wetlands	<p>Seattle has concerns re the complexity of the proposed modeling requirements for wetlands and is unsure of how to perform in both WWHM and MGS Flood.</p>	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
48	I-C.7 Wetland Protection Definitions	Buffers: Consider using a definition similar to Ecology’s definition (Pub 92-10): those areas that surround a wetland or watercourse and reduce adverse impacts to the ecosystem functions and values from adjacent development	Seattle
49	I-C.7 Wetland Protection Definitions	Estuarine Wetlands: Consider using a more standard definition, along the lines of Cowardin: tidal wetlands usually semi-enclosed by land but have open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. Normal salinities range between 0.5 and 30 ppt.	Seattle
50	I-C.7 Wetland Protection Definitions	Invasive Species: In the US, practitioners typically use this guidance provided by EO 13112: a non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human health. Do not include native species in this definition.	Seattle
51	I-C.7 Wetland Protection Definitions	<p>Rare, threatened, or endangered species: Consider modifying as follows to include “protected”, which is used in this Appendix. For example:</p> <p>Rare, threatened, endangered, or protected species</p> <p>and</p> <p>Plant or animal species that are relatively uncommon regionally, are nearing endangered status, or whose existence is in immediate jeopardy and is usually restricted to highly specific habitats. Threatened and endangered species are officially listed and protected by federal and state authorities, whereas rare species are species of concern that may fit the above definitions but are not officially listed as such.</p>	Seattle
52	I-C.7 Wetland Protection Definitions	Redevelopment: Delete this definition as it conflicts with SWMMWW definition	Seattle
53	I-C.7 Wetland Protection Definitions	Vernal Wetland: Unclear; this is not actually a working term. Is the actual intent “Vernal Pool Wetland” or “Vernally Wet Wetland” or “Vernally Moist Wetland”?	Seattle
54	I-D.1 Introduction to Regional Facilities	Potential unintended consequences of new and overly broad description: "A regional facility is a stormwater BMP that provides Runoff Treatment and/or Flow Control to more than one property." It would be very unusual if Ecology intended, for example, a rain garden that drains two properties to be considered a regional facility and subject to guidance (potentially requirements?) included in appendix. Recommend deleting sentence.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
55	I-D.5 Sizing Regional Facilities	Please clarify that this section is guidance, not a must do, and provide flexibility for Runoff Treatment facilities. Recommended text change: “If development is proposed within the contributing area of an existing regional facility, but the regional facility was not originally sized to serve this proposed development, the following guidance may be used to expand the a regional facility <u>providing Flow Control benefits</u> to serve the additional development. <u>Ecology provides guidance for one method for expanding an existing regional facility providing Flow Control; local jurisdictions may choose to use an alternate method, and they are responsible to document how minimum requirements are met. Although allowed, Ecology does not provide guidance on how to expand an existing regional facility providing Runoff Treatment to serve additional development; local jurisdictions would develop methodology and document how Runoff Treatment requirements are met. This guidance only applies to regional facilities providing Flow Control benefits.</u> “	Seattle
56	I-D.6 Regional Facility Area Transfers	Delete the following sentence “ For an in-basin transfer, the regional facility must discharge to the same point (or upstream) in the receiving water as the project that transferred the on-site benefit to it. ” This is a new qualifier for in-basin transfers and is not found in other Ecology permit or guidance documents. The definition found in the Glossary of the Stormwater Control Program: Out of Basin (2nd draft) is different: “In-Basin Transfer: Construction of, or purchase of capacity credit in, a facility that discharges into the same receiving water as the project site.” By limiting the discharge point of an in-basin transfer, Ecology would create a situation in which there is no regional facility pathway for an in-basin transfer that discharges somewhere other than the same point or upstream. If out of basin transfers can be done under certain circumstances, there should be pathways for all potential in-basin transfers.	Seattle
57	I-D.6 Regional Facility Area Transfers	Please revise to clarify Ecology’s intent, which is apparently to provide guidance and not limitations or requirements for MS4s: “Municipalities may allow-in basin area transfers— that comply with the guidance in this section. Though this <u>This</u> guidance is optional and is not expressly incorporated into the Phase I and Western Washington Phase II Municipal stormwater permits. Permittees may, <u>however,</u> infer Ecology’s acceptance of programs that follow the guidance. Alternatives may also be appropriate.”	Seattle
58	I-D.6 Regional Facility Area Transfers	In the “Types of Regional and Equivalent Facilities for Area Transfers” section, add the following text: “The Flow Control facility types include, <u>but are not limited to:</u> ”	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
59	I-D.6 Regional Facility Area Transfers	<p>In the “Determining Regional Facility Capacity for Area Transfers” section, please modify the text to clarify that guidance is for Flow Control only and is only guidance. Recommended change: <u>“For Flow Control area transfers, jurisdictions may use the following guidance to determine the net capacity available in a regional facility that is included in a Flow Control area transfer program. Ecology provides guidance for one method to determine the net capacity available in a regional facility; local jurisdictions may choose to use an alternate method, but they are responsible to document how minimum requirements are met. Although allowed, Ecology does not provide guidance on how to determine the net capacity available in a regional facility that is included in a Runoff Treatment area transfer program; local jurisdictions would develop methodology and how requirements are met.”</u></p>	Seattle
60	I-D.6 Regional Facility Area Transfers	<p>In the “Determining Regional Facility Capacity for Area Transfers” section, please delete the following sentence: “For tracking purposes, the capacity of a regional facility is calculated and documented in terms of area.” This may be done but is not required. Jurisdictions are allowed to develop their own tracking method which may be different from guidance. Tracking may be done in terms of area or may use a different metric. One example where a different metric might be appropriate is for Runoff Treatment facilities that have different source areas contributing.</p>	Seattle
61	I-D.6 Regional Facility Area Transfers	<p>In the “Determining Net Capacity Available for Area Transfers in Regional Infiltration Basin/Detention Pond Type Facility” section, please change text to clarify that procedure is one method and is an example rather than a required method: “The procedure detailed below describes <u>one example of method</u> how to calculate the available capacity of a regional infiltration basin/detention pond type facility for area transfers”.</p>	Seattle
62	I-D.6 Regional Facility Area Transfers	<p>Please change the “Tracking Regional Facility Area Transfers” section to indicate that it describes one possible method to track regional facilities versus current “must prepare and maintain” which is only applicable to Flow Control facilities. Many stated tracking requirements do not make sense for a regional Runoff Treatment facility. (e.g., “The Flow Control standard used to determine the regional facility’s capacity.”)</p> <p>A recommended change, in addition to others to the same effect: “The municipality must prepare and maintain a tracking table that documents <u>[ECY to insert high level description of information Ecology needs to see, for Flow Control facilities and for Runoff Treatment facilities]</u> as described below for any regional facility that serves areas outside of its contributing area using in-basin and or out-of-basin area transfers. <u>Presented below is an example of how regional facility tracking can be done for a Flow Control facility.</u>”</p>	Seattle

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63	I-D.6 Regional Facility Area Transfers	<p>Per above comment, recommend changes:</p> <ul style="list-style-type: none"> • Change subsection title to: “Regional <u>Flow Control</u> Facility Tracking <u>Example</u>”. • Change first sentence to “An example of the type of information that a The municipality must prepare and maintain a tracking table <u>for each Flow Control regional facility may contain includes:</u>” • Change sentence to “The summary sheet will document the location <u>and the capacity used in the regional facility. For flow control facilities, this may be the acreage amount of each land cover types that was used by each project. See Table I-D.3 for an example. The with the total for each type of land cover in Table I-D.3 must matching</u> the Used Capacity column in Table I-D.2. “ 	Seattle
64	III-1.1 Choosing Your Source Control BMPs	Section: How to Determine Which Source Control BMPs are appropriate for the Site: Note that not all Source Control BMPs in Volume IV use the categorization of "operational" or "structural", and "applicable" or "recommended". Please revise text in Volume III to address, or have all Volume IV BMPs include these categorizations.	Seattle
65	III-1.1 Choosing Your Source Control BMPs	Section: How to Determine Which Source Control BMPs are appropriate for the Site: At second bullet of step #2, the 2nd sentence implies that Source Control BMPs are only applicable when listed in "Appendix IV-A: Urban Land Uses..." if you take the converse of this sentence. It should be clear in the Permit and in the SWMMWW when Source Control BMPs are required. As written in Volume I, it appears that Source Control BMPs are only required for projects with greater than 2,000 sf of new or replaced impervious surfaces or 7,000 sf of land disturbing activity.	Seattle
66	III-1.1 Choosing Your Source Control BMPs	Section: How to Determine Which Source Control BMPs are appropriate for the Site: In step #3, it states that the reader shall interpret the term "applicable" as meaning "mandatory" or "required", but many of the Source Control BMPs in Volume IV use such language as: "if possible", "try", "avoid or minimize", "where feasible or practicable", "try to use" - this type of language should be avoided in a mandatory BMP.	Seattle
67	III-1.2 Choosing Your Runoff Treatment BMPs	Provide guidance for identifying the pollutants of concern and choosing Runoff Treatment BMP's specifically for treating runoff from pollution generating "pervious" surface (PGPS) areas. Some BMP's do not seem appropriate for treating lawns and landscaped areas based on the pollutants of concern.	Seattle
68	III-1.2 Choosing Your Runoff Treatment BMPs	Clarify in Steps 4, 5 and 6 if Vegetated Filter Strips are suitable for treating runoff for pollution generating "pervious" surface (PGPS) areas (and if there are any other BMP's that are not appropriate for Runoff Treatment for pollution generating pervious areas).	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
69	III-1.2 Choosing Your Runoff Treatment BMPs	Provide guidance to establish a landscaped area that is not considered to be a pollution-generating surface (i.e. area where pesticides, herbicides, fertilizers, and disruptive maintenance occurs and where loss of soil is not a concern). Would this require a covenant?	Seattle
70	III-1.2 Choosing Your Runoff Treatment BMPs	Provide guidance to determine the pollutants of concern and the appropriate Runoff Treatment BMP's for synthetic turf. The pollutants of concern on synthetic turf may be different (e.g. leaching from plastic and infill material, detergents used to wash the turf, suspended solids from infill materials, paints, etc.).	Seattle
71	III-2.2 Continuous Simulation Models	The last sentence in the first paragraph under "Using WWHM to Model Flow-Related Standards", coordinate with the section that states "and the wetlands protection standards as described in MR8: Wetlands Protection" since WWHM would not be capable of the proposed new Wetland Protection standards.	Seattle
72	III-2.2 Continuous Simulation Models	We will need a full report on why MGS Flood is not approved before we can comment on this. If they are just missing some LID modeling capabilities, I'm not sure that is a good reason to prevent the whole program. MGS Flood is much less "buggy" than WWHM. WWHM is notorious for errors, anomalies of giving different results when running the same model, and problems with working on certain computers. There would need to be some very serious problems with MGS Flood to say that it is not approved. Please consider having a technical panel that consists of consultants, muni agencies, and independent experts to review assumptions of both MGS & WWHM.	Seattle
73	III-2.6 Sizing Your Runoff Treatment BMPs	Describe the basis and actual calculations used to establish the difference of flowrates for Off-line vs On-line Runoff Treatment BMP's as calculated by WWHM or MGS Flood.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
74	III-3.2 Preparing a Stormwater Site Plan	<p>Vol. III-3.2 - Please change references to “grant of easement” for Site Plan, by providing the options that Ecology has indicated meet its intent. For at least two instances, change as follows: “... recordable document that can be attached to a declaration of covenant, and grant of easement <u>or other legal agreement or recordable document</u>, associated with each lot”.</p> <p>Reason: This wording has needed adjustment since Ecology began to explore implementation of the current MS4 permits in coordination with MS4 permittees. Municipalities explained that they use various documents when issuing development authorizations, and often, or even typically, do not take a legal interest in property by recording an easement. Recording a declaration of covenant accomplishes Ecology’s goal, as shown by the fact that Ecology used Seattle’s declaration approach as the first example in Appendix 1 to its 2013 implementation guidance, “Western Washington Low Impact Development (LID) Operation and Maintenance,” and by even more the flexible approach the 2013 guidance takes at “Legal Agreements and Recordable Documents.”</p>	Seattle
75	S401 BMPs for the Building, Repair, and Maintenance of Boats and Ships	Change word "pipers" to "piers" in the last bullet item of Applicable Operational BMPs.	Seattle
76	S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	In Applicable BMPs, Deicing and Anti-icing Operations, bullet item 1, selection of materials to use is a suggestion. This activity is guided by safety issues as priority and selection of de or anti-icing products should be in the Recommended Additional BMPs section.	Seattle
77	S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	In Applicable BMPs, Deicing and Anti-icing Operations, bullet item 2, selection of materials to use based on environmental impact is a suggestion. This should be in the Recommended Additional BMPs section.	Seattle
78	S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	The Maintenance Operations section appears to be inserted in error and does not apply to this BMP.	Seattle
79	S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	In the Recommended Additional BMPs section, bullet item 1; In addition to recommending that roadway surfaces be cleaned in spring it should be mentioned that drainage structures on heavily sanded roadways should be inspected and cleaned as necessary in spring as well as a suggestion.	Seattle
80	S406 BMPs for Deicing and Anti-Icing Operations for Streets / Highways	Section on Maintenance Operations does not appear to relate to deicing and anti-icing. Consider placing this section elsewhere or renaming this BMP.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
81	S407 BMPs for Dust Control at Disturbed Land Areas and Unpaved Roadways and Parking Lots	In the Applicable Operational BMPs section, bullet item 8; Street, gutters, sidewalks, and driveways need to be swept. This states that this is to collect and dispose of loose debris and garbage. Please add "dusts and surface dirt" that should be swept up. Debris usually means material with measurable features rather than dust or dirt.	Seattle
82	S409 BMPs for Fueling At Dedicated Stations	In Applicable Operational BMPs, bullet item #7; prohibits the use of dispersants but dispersants can sometimes be advantageous if they are subsequently cleaned up with absorbents. It can allow a better cleanup and help minimize vapor pressure on the spill surface. Add to the end of the sentence , "unless removed for disposal following application. Dispersants are not allowed to enter treatment systems or discharge to sanitary sewer."	Seattle
83	S409 BMPs for Fueling At Dedicated Stations	Under the Applicable Structural Source Control BMPs, bullet item 3; it implies that the containment pad has a shutoff valve between the pad and the treatment facility and that this valve is normally kept closed. The valve should be on the outlet from the treatment facility which acts as part of the containment volume needed for the fueling area. In all cases, drainage from the spill containment pad should pass through treatment before discharging to the sanitary sewer or other outlet. Also, if there is a sanitary sewer connection at the site it should be the preferred method of discharge as opposed to discharge to a storm sewer or surface water. There are water miscible components of fuels (benzene, ethanol, etc) that will not be captured by oil water separators and should be routed to sanitary sewer as a first option rather than storm drainage. The last sentence in this bullet item states that the "spill control sump" must be sized in compliance with fire code. This should state that the "spill control capacity" must be sized... The spill control could be composed of multiple components not just sumps. In addition, fuel floats and it is not the size of the sump that is important for spill control capacity.	Seattle
84	S409 BMPs for Fueling At Dedicated Stations	Under the Applicable Structural Source Control BMPs, bullet item 4; The last sentence states, "Raised sills are not required at the open-grate trenches that connect to an approved drainage-control system." Since the drains on the spill containment pad are not part of a drainage control system, rather a spill control system, does this mean that trench drains are not allowed to be used on the spill control pad but only to exclude run-on around the spill control pad? Add text to the end of this sentence, "or spill containment system."	Seattle
85	S409 BMPs for Fueling At Dedicated Stations	In a number of instances in this BMP it give the option to convey stormwater collected on the fuel island containment either to sanitary sewer or to treatment. Stormwater collected on this spill containment pad should always be routed through treatment first no matter the off-site discharge point. Without proper spill control treatment system prior to sanitary sewer discharge provides a high risk to the sewer system and should not be allowed.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
86	S409 BMPs for Fueling At Dedicated Stations	In the Additional BMP for Vehicles 10 feet in height or greater, bullet item #1; This states that a shutoff valve is required for spill control and be in the closed position in the event of spill. It then states that an automatic valve is preferred to minimize the time lapse between spill and containment. If the valve is to remain closed then where is the time lapse? How is this requirement different from a covered fuel pad option?	Seattle
87	S409 BMPs for Fueling At Dedicated Stations	In the Additional BMP for Vehicles 10 feet in height or greater, bullet item #2; it states that the valve may be opened to convey contaminated stormwater to sewer or to treatment. Wouldn't contaminated stormwater generally require treatment before being discharged to sanitary sewer or to any other discharge option? It is unclear that the BMPs in this section are different from the covered fueling area BMPs.	Seattle
88	S409 BMPs for Fueling At Dedicated Stations	In the Additional BMP for Vehicles 10 feet in height or greater, add a bullet item. "Uncovered fueling areas can contribute excessive stormwater volume to the sanitary sewer from impervious surfaces and should be approved by the local sewer utility." Size the spill control area similar to what is found in BMP S412, "Slope, berm, or dike the spill control areas to a dead-end sump, spill containment sump, a spill control oil/water separator, or other spill control device. The minimum spill retention time should be 15 minutes at the greater flow rate of the highest fuel dispenser nozzle through-put rate, or the peak flow rate of the 6-month, 24-hour storm event over the surface of the containment pad, whichever is greater. The capacity of the spill containment should be a minimum of 50 gallons with adequate additional volume provided for grit sedimentation."	Seattle
89	S409 BMPs for Fueling At Dedicated Stations	Under "Additional BMP for Vehicles 10 feet in height or greater", the first bullet states to keep an emergency shutoff valve in the closed position in the event of a spill. Include a discussion of oil stop valves, which will close automatically when there is a spill. Provide more guidance on automatic valves. Should automatic valves be required in some instances?	Seattle
90	S410 BMPs for Correcting Illicit Connections to Storm Drains	This BMP addresses illicit connections and should include illicit discharges as well. Change title to, "for Correcting Illicit Connections and Prohibited Discharges to Storm Drains."	Seattle
91	S410 BMPs for Correcting Illicit Connections to Storm Drains	In Applicable Operational BMPs, bullet item 2; change word "discharge" to "connection"	Seattle
92	S410 BMPs for Correcting Illicit Connections to Storm Drains	In Applicable Operational BMPs, bullet item 4; change "unpermitted wastewater" to "prohibited". Not all prohibited discharges to storm sewers are water.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
93	S410 BMPs for Correcting Illicit Connections to Storm Drains	In Applicable Operational BMPs, bullet item 7; if these discharges are illicit or prohibited then why would a permit be available? Repword this bullet item to better define that some discharges may be acceptable with proper treatment and that local and state permits would be required for their approval.	Seattle
94	S410 BMPs for Correcting Illicit Connections to Storm Drains	Make the "Recommended Additional Operational BMPs" as a conditional "Applicable Operational BMP". Clarify this BMP with a preceding statement, "If required by local regulation or Ecology to identify and map your drainage..... This should be an enforceable BMP in many circumstances.	Seattle
95	S410 BMPs for Correcting Illicit Connections to Storm Drains	In Recommended Additional Operational BMPs, bullet item 1; add at the end of the sentence, "or discharge to local surface waters"	Seattle
96	S411 BMPs for Landscaping and Lawn / Vegetation Management	In the Applicable Operational BMPs section, bullet item 1; This is a structural BMP that requires installation of engineered soil/landscape systems. This should be a recommended BMP or in an Applicable Structural BMP section.	Seattle
97	S411 BMPs for Landscaping and Lawn / Vegetation Management	Many of the bullet items in the Applicable Operational BMPs are actually recommendations. If a bullet item is not enforceable then it should be placed in a recommended section. Choosing proper plants, disposal practices for weeds, composting practices, etc., are not activities directly tied to protecting stormwater and should be recommendations.	Seattle
98	S411 BMPs for Landscaping and Lawn / Vegetation Management	Bullet on Monitor tree support systems--second sub-bullet, and 3rd sub-bullet are over-prescriptive. Seattle Parks has large inventory of trees, and many new trees; gardeners and arborists will appropriately care for trees. Main bullet and first sub-bullet are sufficient for BMP.	Seattle
99	S411 BMPs for Landscaping and Lawn / Vegetation Management	Bullet on selecting the right plants -- add "proposed use and available maintenance"	Seattle
100	S411 BMPs for Landscaping and Lawn / Vegetation Management	Bullet on noxious weeds -- add "Washington State Noxious Weed List https://www.nwcb.wa.gov/printable-noxious-weed-list "	Seattle
101	S411 BMPs for Landscaping and Lawn / Vegetation Management	There are references to the "noxious weed list". Provide some guidance regarding where readers can find this list.	Seattle
102	S411 BMPs for Landscaping and Lawn / Vegetation Management	Under the Recommended Additional Operational BMPs, change "Use native plants in landscaping" to "Use native plants in landscaping where appropriate" or something similar. A non-native plant in the right setting might be preferable to a native in the wrong setting.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
103	S412 BMPs for Loading and Unloading Areas for Liquid or Solid Material	In the Applicable Structural Source Control BMPs: At All Loading/Unloading Areas, bullet item 1; it says to conduct unloading or loading....in a manufacturing building, under a roof, or lean-to. Remove the word "manufacturing". It does not matter the use of the building.	Seattle
104	S414 BMPs for Maintenance and Repair of Vehicles and Equipment	In the Applicable Operational BMPs section, bullet item 2; This BMP requires placement of drip pans beneath leaking parts or vehicles. Additional requirement should be to actively manage these drip pans to prevent overflowing with rainwater and that they should be removed once the leak has stopped.	Seattle
105	S414 BMPs for Maintenance and Repair of Vehicles and Equipment	In the Applicable Operational BMPs section, bullet item 5; this BMP refers to "waste oil" when it should say "used oil".	Seattle
106	S414 BMPs for Maintenance and Repair of Vehicles and Equipment	The additional Applicable BMPs section list a number of BMPs from this manual and is unnecessary. This section should be removed or this type of section should be in every BMP. All other BMPs in this manual may be additionally applicable.	Seattle
107	S416 BMPs for Maintenance of Roadside Ditches	Recommended Treatment BMPs--reference numbers for biofiltration do not appear to be correct.	Seattle
108	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	General: BMP S417 as a topic should only be in the O&M portion of SWMMWW. Specific: In the Pollution Control Approach section it states that you do maintenance and cleaning to "obtain" proper operation. This should say to "maintain" proper operation to ensure that the BMPs continue to operate as designed to protect ground and surface waters." Additionally, it alludes to cleaning if there is debris, sediments, or oil. Oil is not the only pollutant that can be found in drainage. Many drains are impacted by concrete slurry, paints, gasoline, sewage dumped from RVs, other automotive fluids, illegal dumping, etc. Change the word "oil" to "pollutants".	Seattle
109	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	In the Applicable Operational BMP section, bullet item 3; this states that you should "prevent heavy sediment discharges to the sewer system". It appears the meaning is that though you have a treatment system, you should still not allow heavy sediment loading of the treatment system? Perhaps it should say, "prevent heavy sediment discharges to the treatment system"?	Seattle
110	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	In the Applicable Operational BMP section, bullet item 4; BMP advocates discharging debris and sludge to a sanitary sewer system. This may not meet local limits for the sewer utility. This suggestion should be removed.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
111	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	In Applicable Operational BMPs section add another bullet item that states that "Properly dispose of all solids, polluted material, and stagnant water collected through system cleaning. Do not decant water back into the drainage system from eductor trucks or vacuum equipment since there may be residual contaminants in the cleaning equipment. Do not jet material downstream into the public drainage system."	Seattle
112	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	In the Applicable Operational BMPs section, bullet item 7; This section advises to post warning signs adjacent to storm drain inlets. If this is an applicable BMP then the words "where possible" needs to be removed. If this is a recommended BMP then it should be moved to such a section.	Seattle
113	S417 BMPs for Maintenance of Stormwater Drainage and Treatment Systems	The Additional Applicable BMPs section is not needed. This section lists just a few of the BMPs from this manual yet all BMPs may apply. Remove this section.	Seattle
114	S419 BMPs for Mobile Fueling of Vehicles and Heavy Equipment	In Applicable Operational BMPS section, bullet item 3; begins, "Ensure compliance with all 49 CFR 178 requirements for DOT 406 cargo tanker." Since not all mobile fueling is conducted from these specific tanker trucks it would be best to replace "DOT 406 cargo tanker" with, "all fuel delivery vehicles or containers."	Seattle
115	S419 BMPs for Mobile Fueling of Vehicles and Heavy Equipment	In Applicable Operational BMPS section, bullet item 8; it requires that immediate notification to the local fire department and appropriate regional office of the Department of Ecology for spills to surface or ground waters. This should also include a requirement to notify any local government agency with spill response and reporting requirements.	Seattle
116	S419 BMPs for Mobile Fueling of Vehicles and Heavy Equipment	In Applicable Operational BMPS section, bullet item 12; addresses cleanup of spilled fuel and to properly dispose. It probably should be mentioned that soil cleanup from spills of gasoline will likely be a dangerous/hazardous waste due to benzene levels. This will help prevent improper disposal of gasoline spill wastes as a solid waste.	Seattle
117	S419 BMPs for Mobile Fueling of Vehicles and Heavy Equipment	In Applicable Operational BMPs, bullet item #9; prohibits the use of dispersants but dispersants can sometimes be advantageous if they are subsequently cleaned up with absorbents. Dispersants can allow a better cleanup and help minimize vapor pressure on the spill surface. Add to the end of the sentence , "unless removed for disposal following application. Dispersants are not allowed to enter treatment systems or discharge to sanitary sewer."	Seattle
118	S419 BMPs for Mobile Fueling of Vehicles and Heavy Equipment	BMP on contaminated soil--modify to "immediately secure and promptly remove and dispose of soils..." It may not be practicable to immediately remove contaminated soils.	Seattle

#	Draft 2019 SWMMWW Section	Comment	Comment Made By
119	S420 BMPs for Painting/Finishing/Coating of Vehicles/Boats/Buildings/Equipment	In the Applicable Operational BMPs section, bullet item 8 states, "Dump pollutants collected in portable containers into a sanitary sewer drain, NOT a stormwater drain." This statement is alarming! It is not clear what the purpose of the statement is and it should be removed.	Seattle
120	S420 BMPs for Painting/Finishing/Coating of Vehicles/Boats/Buildings/Equipment	In the Applicable Operational BMPs section, bullet item 10 states, "Store toxic materials under cover (tarp, etc.) during precipitation events and when not in use to prevent contact with stormwater." Instead of "toxic" materials it should state, "pollution generating" materials.	Seattle
121	S421 BMPs for Parking and Storage of Vehicles and Equipment	In the Applicable Operational BMPs section, bullet item 2; The second sentence says to vacuum sweep lots, storage areas, and driveways. There are many areas of these facilities that can't be accessed by a vacuum sweeper and are usually neglected and accumulate pollutants. This sections and similar referral to vacuum sweeping should also encourage other forms of sweeping to ensure that all areas are cleaned. Mechanical and hand sweeping area options. Using a blower to push dirt, waste, and debris into an area that can be vacuum swept is also an option.	Seattle
122	S421 BMPs for Parking and Storage of Vehicles and Equipment	In the Applicable Operational BMPs section, bullet item 4; This BMP requires placement of drip pans beneath leaking vehicles. Additional requirement should be to actively manage these drip pans to prevent overflowing with rainwater and that they should be removed once the leak has stopped.	Seattle
123	S421 BMPs for Parking and Storage of Vehicles and Equipment	In the Applicable Treatment BMPs section it lists examples of potential high use areas that might require oil control BMP but focuses on mainly commercial uses. I would suggest adding an additional industrial example, "parking, storage or maintenance of 25 or more vehicles that are over 10 tons gross weight (trucks, buses, trains, heavy equipment, etc.)".	Seattle
124	S422 BMPs for Railroad Yards	In the Description of Pollutant Sources it refers to wastes that can be generated such as "waste" oil. Suggest this should be "used" oil.	Seattle
125	S422 BMPs for Railroad Yards	In the Applicable Operational and Structural Source Control BMPs, bullet item 8; it refers to a particular water based coolant (from multi-punch presses) that should not be dumped into storm drains. It should just state that water based coolants should not impact the storm drainage system.	Seattle
126	S423 BMPs for Recyclers and Scrap Yards	In Applicable BMPs section, bullet item 7; it states that all fluid containers must comply with secondary containment requirements. This is only true for some containers stored outside. Perhaps it would be best to refer to BMP S427 for proper compliance of containers stored outside. Additionally, it specifically singles out containers of gasoline as requiring compliance with Fire Codes. All flammable and combustible fluids would need to comply with Fire Codes to include diesel.	Seattle

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127	S423 BMPs for Recyclers and Scrap Yards	In the Required Routine Maintenance section it addresses transportation requirements for trucks. This requires trucks to have a spill kit and impermeable liner in the bed of the truck. This is not a maintenance issue. Stormwater code should not address transportation requirements that are the purview of another agency. This bullet item should be removed.	Seattle
128	S424 BMPs for Roof / Building Drains at Manufacturing and Commercial Buildings	In the Description of Pollution Sources it states that buildings can be sources of pollutants caused by leaching of roofing materials.... PCBs can be found in paints and caulking used before 1980. Add ", paints, caulking," after roofing materials. In the last sentence in this section it lists some of the pollutants and should include PCBs for buildings built prior to 1980.	Seattle
129	S424 BMPs for Roof / Building Drains at Manufacturing and Commercial Buildings	In the Applicable Operational Source Controls BMPs section, bullet item 2 states to, "Sweep the area routinely to remove any zinc residuals." Users of this manual may think that only zinc items need to be swept up. It might be best to explain that zinc adheres to soil particles and that sweeping up surface dirt as well as metal fragments can help remove sources of zinc.	Seattle
130	S426 BMPs for Spills of Oil and Hazardous Substances	This section refers to a Spill Prevention and Emergency Cleanup Plan (SPECP) and identifies this as being required by federal law. Federal law requires a spill prevention and response plan or a Spill Prevention Control and Countermeasures (SPCC) plan. Ecology is the agency that requires a SPECP as part of the SWPPP required by NPDES permit coverage. This section improperly identifies the SPECP as the SPCC for oil storage of 1320 or more gallons. In addition, this section states that a SPECP is required for "businesses that produce dangerous wastes", which is untrue. This section should be cross checked with other state and federal regulations to make this requirement more accurate.	Seattle
131	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	Change the name of this to "BMPs for Storage of Portable Containers". This BMP should apply to all containers of materials or waste that can pose a threat to stormwater. As it is written, this BMP only applies to liquid drums or drums of solid Dangerous Waste. Dangerous Wastes accumulation or storage areas are already regulated by WAC 173-303 and require exactly this level of protection in nearly every situation unless the container sotrage areas were built prior to 1986.	Seattle

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132	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	Remove the following from the Pollution Control Approach section, "When collection trucks directly pick up roll-containers, ensure a filet is on both sides of the curb to facilitate moving the dumpster. For storage areas on-site for less than 30 days, consider using a portable temporary secondary system like that shown in Figure 1-1520.1: Figure IV-2.2.8 Secondary Containment System in lieu of a permanent system as described above." This information is more appropriate as a bullet item in the Recommended BMP section and not as a description the pollution control approach. Add a sentence to define the approach as "to secure containers to prevent spillage or exposure."	Seattle
133	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Description of Pollutant Sources, the third sentence is very prescriptive in defining the type of material this BMP is to be used on, "Use these BMPs when temporarily storing accumulated food wastes, vegetable or animal grease, used oil, liquid feedstock, cleaning chemicals, or Dangerous Wastes (liquid or solid). " I would recommend striking the specific materials and simply refer to containers of "potential pollution generating materials or wastes". This would also make it applicable to solid materials other than Dangerous Wastes. Storing containers of caustic powders, oxidizers, oily coated metal parts, and solid wastes that are not a Dangerous Waste can pose a hazard to stormwater.	Seattle
134	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Applicable Operational BMPs section, bullet item 2; This states that all containers must be labeled with "accumulation start dates", however product containers and food wastes would not have need for such a date. Add additional information such as, "Position containers so labels are clearly visible."	Seattle
135	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Applicable Operational BMPs section, bullet item 5; states that, "Businesses accumulating Dangerous Wastes that do not contain free liquids need only to store these wastes in a sloped designated area with the containers elevated or otherwise protected from storm waterstormwater run-on." This implies that the other bullet items do not apply, such as keeping a tight lid on the container. Solid Dangerous Wastes can also be ignitable or reactive solids and should be managed safely and in compliance with Fire Code. Change this to, "Store containers that do not contain free liquids in a designated sloped area with the containers elevated or otherwise protected from stormwater run-on. Comply with local fire code."	Seattle
136	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Applicable Operational BMPs section, add another bullet item. "Empty drums containing residues should be stored to prevent stormwater from entering drum closures. Cover or tilt drums to prevent stormwater from accumulating on the top of empty drums and around drum closures."	Seattle

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137	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Applicable Operational BMPs section, bullet item 12; it states to drain dumpsters and/or dumpster pads to sanitary sewer. This is a structural source control BMP and should be moved to that section. If dumpster pads are to be plumbed to the sanitary sewer there may be concern from the local sewer utility about adding extra stormwater into the sanitary sewer system and should be addressed in your bullet statement. This bullet item also states, "Keep dumpster lids closed." The previous bullet item addresses covering dumpsters and is a more appropriate place for this statement. The last sentence in this bullet item states, "Install waterproof liners." This would be best to add to the last sentence in the previous bullet item with an "or" where it states, "Replace or repair leaking garbage dumpsters." The result would be, "Replace or repair leaking garbage dumpsters or install waterproof liners."	Seattle
138	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Applicable Structural Source Control BMPs section the third bullet item states, "For liquid wastes, surround the containers with a dike as illustrated in Figure 1-1520.3: Figure IV-2.2.10 Covered and Bermed Containment Area. The dike must be of sufficient height to provide a volume of either 10 percent of the total enclosed container volume or 110 percent of the volume contained in the largest container, whichever is greater." Containers of dangerous liquid products that are not waste would be excluded from this secondary containment requirement when they pose a similar hazard. Remove and replace both the second and third bullet items into text, "Store liquid containers other than clean water in a designated area. Provide covered secondary containment that is capable of holding a volume of either 10 percent of the total volume of the enclosed containers or 110 percent of the volume of the largest container, whichever is greater. Provide a portable secondary containment unit or cover and pave the storage area with an impervious surface and install a berm or dike to surround the area. Slope the area to drain into a dead-end sump for the collection of leaks and small spills." or something similar.	Seattle
139	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	In the Applicable Treatment BMPs section it addresses treatment of stormwater collected in drum storage containment areas. The previous section addresses structural Source Control BMPs and states that containment area must go to a dead end sump. By definition this is a sump without an outlet yet this treatment BMP says to connect the sump outlet to a sanitary sewer. If the containment area is properly covered there will accumulate very little stormwater and a dead-end sump can be pumped out for disposal after testing or treatment. Remove the first bullet item in this section or better define if a dead end sump is always needed for containment.	Seattle

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140	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	Bullet on labeling--agree with label with contents. Accumulation date is only necessary for dangerous waste; owner information is not necessary if containers are secured in area without unauthorized personnel.	Seattle
141	S427 BMPs for Storage of Liquid, Food Waste, or Dangerous Waste Containers	Under the last bullet, "Drain dumpsters and/or dumpster pads to sanitary sewer", add language that this requires approval from the local jurisdiction.	Seattle
142	S428 BMPs for Storage of Liquids in Permanent Aboveground Tanks	Large petroleum product tank farms typically do not have an impervious bottom within their containment area. During spills, this design is to prevent the concentration of highly volatile flammable liquids from being contained in an open pool which can cause an extreme fire risk. This design requirement to have an impervious bottom within the containment area is also not a requirement of SPCC. If this impervious containment is a requirement then many large petroleum product tank farms will require modification to conform.	Seattle
143	S428 BMPs for Storage of Liquids in Permanent Aboveground Tanks	In the Pollutant Control Approach section it focuses on treatment of collected stormwater through oil removal treatment BMPs though the tanks can hold any type of material other than uncontaminated water. Tanks could contain inorganic acid or caustic solutions, water miscible solvents, immiscible solvents with specific gravity denser than water, or any other non-oil type of material. It might be best to be less specific about the type of treatment needed for containment water.	Seattle
144	S428 BMPs for Storage of Liquids in Permanent Aboveground Tanks	In the Applicable Structural BMPs section it states to "Slope the secondary containment to drain to a dead-end sump or equivalent, for the collection of small spills." This would mean that there is no direct connection to storm or sewer from this containment. In the Applicable Treatment BMPs it states, "For an uncovered tank containment area, equip the outlet from the spill-containment sump with a normally closed shutoff valve. Operators may open this valve manually or automatically, only to convey contaminated stormwater to approved treatment or disposal, or to convey uncontaminated stormwater to a storm sewer." These two statements are incompatible since a dead-end sump or equivalent should not be connected to the storm sewer.	Seattle
145	S428 BMPs for Storage of Liquids in Permanent Aboveground Tanks	In the Applicable Treatment BMPs, bullet item 2; it discusses possible ways to determine that collected stormwater in the tank containment area is clean enough to discharge to the storm sewer. The operator should be required to develop a written plan that defines the process used to determine that the collected stormwater is clean and to document in a log that this process was followed and when water was discharged.	Seattle

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146	S428 BMPs for Storage of Liquids in Permanent Aboveground Tanks	In the Applicable Treatment BMPs, bullet item 3; it states that petroleum tank farms must treat stormwater contaminated with floating oil or debris prior to discharge to storm drain or surface water. This should include an option or recommendation to go to sanitary sewer if approved.	Seattle
147	S429 BMPs for Storage or Transfer (Outside) of Solid Raw Materials, Byproducts, or Finished Products	This BMP has a section titled, "Applicable Operational BMP" with a subsection titled, "The Following are additional Recommended Operational BMPs". Many of these recommended BMPs should be required. Bullet item 1 requires proper sloping of the storage area to prevent pooling and leachate formation. This should be required. Bullet item 2 states to sweep paved storage areas regularly which should be required. Bullet item 3 says to stock cleanup materials near the storage area, this too should be required. Make these all required items.	Seattle
148	S429 BMPs for Storage or Transfer (Outside) of Solid Raw Materials, Byproducts, or Finished Products	Add a bullet item for Applicable Operational BMPs to include, "For stockpiles less than 5 cubic yards not covered with a structure, cover the pile with temporary plastic sheeting or equivalent temporary cover. Keep the pile covered when the pile is not actively in use." A pile of less than 5 yards can still be a potent source of pollution depending on the material and should be covered.	Seattle
149	S429 BMPs for Storage or Transfer (Outside) of Solid Raw Materials, Byproducts, or Finished Products	In the Applicable Structural BMP section one option is to use a temporary tarp or plastic sheeting to cover piles or storage areas. This really is not a structural BMP and should be in the Applicable Operational BMP section.	Seattle
150	S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	Remove Applicable Structural Source Control BMPs, bullet item 3. This is duplicative of bullet item 2. Note in bullet item 2 that if a manual valve is used that a tool must be located near the valve and clearly marked to identify its use.	Seattle
151	S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	In Applicable Structural Source Control BMPs, bullet item 4; This section addresses diverting clean stormwater from passing through the pre-treatment system off of the wash pad. This is currently worded in a confusing way. It appears the author is trying to suggest a two way diversion valve rather than a valve that is open or closed. The diversion valve should be switched to discharge to the drainage system when washing is not happening and switched to the treatment system and sanitary sewer when washing is happening.	Seattle
152	S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	In Recommended Additional BMPs, bullet item 1; identify what needs to be marked at the wash area. Suggest that it be signed to identify the use as a wash area, use instructions, outline of acceptable wash area (pavement marking), location of the valve tool, etc.	Seattle
153	S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	last bullet- typo "properly"	Seattle

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154	S431 BMPs for Washing and Steam Cleaning Vehicles / Equipment / Building Structures	Under the second paragraph, "Permitting Requirements", add language that states that there may be limits on the amount of stormwater that can be discharged to sanitary sewers.	Seattle
155	S433 BMPs for Pools, Spas, Hot Tubs, and Fountains	In the Description of Pollutant Sources section it states, "Industrial Stormwater Permittees that use pools, spas, hot tubs, and fountains as part of an industrial process should refer to their Industrial Stormwater Permit." Not familiar with any industrial process that uses a spa, hot tub, or fountain as part of their industrial process. Have seen used decoratively or in a commercial setting such as health club but not as a industrial process.	Seattle
156	S434 BMPs for Dock Washing	Perhaps this section should address cleaning up pollutants (sweeping or vacuuming) before washing with low pressure water only. If slippery substance or pollutants need to be removed by more active force then a capture system must be used to remove the wastewater generated. All other bullet items are suggestions.	Seattle
157	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 1; remove from second sentence "at least once per week or". Why would a weekly dock cleaning be necessary?	Seattle
158	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 5; this item is a suggestion ("Try pressure washing using light pressure...") and should be in a section identified as recommended.	Seattle
159	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 6; this item is a suggestion and should be in a section identified as recommended.	Seattle
160	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 7; remove "on shore" from the end of the sentence. Using the term "on shore" makes it seem possible that it could be dumped onto the shore.	Seattle
161	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 8; this item is a suggestion and should be in a section identified as recommended. "If a cleaner is needed, start with vinegar and baking soda and move to other options as needed..."	Seattle
162	S434 BMPs for Dock Washing	In Applicable Operational BMPs, bullet item 10; this item is a suggests that washwater, debris, and "substances" can be disposed onto land at the end of the dock. This land disposal of washwaters is prohibited in BMP S431. Change one BMP or the other to make them consistent.	Seattle
163	S435 BMPs for Pesticides and an Integrated Pest Management Program	Many of the Applicable Operational BMPs are suggestions rather than requirements. Move any suggestions or opinions to the Recommended Additional Operational BMPs section. This includes bullet items #1, 2, 7, 8, 9, 13, and 14. Are all pesticide applications required to have an IPM? If development and implementation of an IPM is recommended and not universally required it should be moved to the Recommended section. Bullet items 5 and 6 should be subcategories of bullet item 4.	Seattle

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164	S435 BMPs for Pesticides and an Integrated Pest Management Program	Add additional bullet item to Applicable Operational BMPs. "For chemical applied roof moss control, prevent runoff from entering downspouts or otherwise contaminate stormwater."	Seattle
165	S436 BMPs for Color Events	In the Applicable Operational BMPs section add a bullet item "Plan your event route within areas that drain to a combined sewer if available."	Seattle
166	S439 BMPs for In-Water and Over-Water Fueling	The Applicable Operational BMPs for Fuel Docks section, bullet item 1; Have an employee supervise the fuel dock. should be revised to, "Have a trained employee supervise the fuel dock."	Seattle
167	S439 BMPs for In-Water and Over-Water Fueling	The Applicable Operational BMPs for Fuel Docks section, bullet item 9; Train staff on proper fueling procedures.. should be revised to, "Train staff on proper fueling procedures. Document training and retain records."	Seattle
168	S440 BMPs for Pet Waste	New apartment and condominium buildings are offering pet friendly amenities such as roof-top dog runs with pet relief stations. Many of these are built with underdrains connected to the roof drainage which may end up in the storm sewer system or they could end up in stormwater detention systems that go to sanitary sewer. Many of these designs include automatic irrigation water to clean these surfaces to prevent odor problems. This manual should caution users that these amenities should be properly planned to prevent drainage from these areas from impacting public drainage or causing problems with stormwater detentions systems.	Seattle
169	S440 BMPs for Pet Waste	BMPs for Pet Waste should apply to private entities and is not appropriate for public parks. Municipal permittees are required to to develop education and outreach programs that address pet waste management and disposal (Phase I S5.C.11). Municipal programs have been developed based on specific needs of the jurisdiction. As such, pet waste stations and publically supplied disposal bags have been located in prioritized locations. Seattle suggests the revision of Applicable Operational BMPs 6th bullet to read: When planning a ((ADD)private) recreation site or multi-family housing complex provide biodegradable disposal bags and disposal stations with signage. Alternatively, this should be moved to Optional Operational BMPs.	Seattle
170	S440 BMPs for Pet Waste	Applicable Operational BMP to "Carefully consider the placement of pet waste stations. Choose locations convenient for dog walkers to pick up a bag at the start of their walk and locations for them to dispose of it at mid-walk or at the end of their walk." Please clarify that this does not apply to public areas and are meant for private sites. Alternatively, this should be moved to Optional Operational BMPs.	Seattle

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171	S440 BMPs for Pet Waste	Applicable Operational BMP to "check pet waste stations" and keep stocked. Please clarify that this does not apply to public areas and are meant for private sites. Alternatively, this should be moved to Optional Operational BMPs.	Seattle
172	S440 BMPs for Pet Waste	Applicable Operational BMP to "bathe pets indoors or have pets professionally groomed." Seattle recommends: "Bathe pets indoors or ((ADD) in a manner that wash water won't be discharged) ((DELETE) have pets professionally groomed."	Seattle
173	S440 BMPs for Pet Waste	Add a section for Rooftop Dog Runs, as these are commonly being constructed on new apartments and condos. These facilities are typically constructed of artificial turf and include washing systems. New construction is currently required to discharge these dog runs to the building sanitary plumbing system. There is a limit on the size (200sf in Seattle) that can discharge stormwater to the plumbing system unless it discharges to the combined sewer. The BMP should make it clear that typical rooftop dog runs cannot discharge to storm, and to check with the local jurisdiction regarding stormwater limits to the sanitary system.	Seattle
174	S441 BMPs Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing	In Optional Operational BMPs, bullet item 1; what is storm drain flushing and how would you use a hydrant for this purpose? Storm drain flushing with potable water seems like a prohibited discharge.	Seattle
175	S441 BMPs Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing	In Optional Operational BMPs, bullet item 3; flushing and tank maintenance discharges on a dry day will concentrate the pollutants disturbed from these activities. If drainage line capacity issues are not a factor it might be wiser to flush or hydrant test on days where the stormwater flow will dilute the non-stormwater. I would recommend removing this bullet item.	Seattle
176	S441 BMPs Potable Water Line Flushing, Water Tank Maintenance, and Hydrant Testing	In Optional Treatment BMPs, bullet item 2; It states that you should not over apply dechlorination agents. This sounds more like an enforceable requirement and not a suggestion. This should be moved to Applicable Operational BMPs.	Seattle
177	S443 BMPs for Fertilizer Application	Many of the Applicable Operational BMPs are suggestions and should be moved to the Recommended Operational BMPs section. The BMP addressing turfgrass is just a statement and not a BMP. Some of these bullet items are redundant such as addressing applying appropriate amounts of fertilizer and when best to apply (see bullet items 5 and 14).	Seattle
178	S444 BMPs for the Storage of Dry Pesticides and Fertilizers	Change "carbonates" to "carbamates" in the Description of Pollution Sources section.	Seattle

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179	S444 BMPs for the Storage of Dry Pesticides and Fertilizers	This BMP applies to dry materials yet in the Applicable Structural BMPs it requires this material to be enclosed or covered. Enclosure usually refers to enclosed by sides while cover is a roof. Dry pesticides should be covered.	Seattle
180	S444 BMPs for the Storage of Dry Pesticides and Fertilizers	In the Applicable Operational BMPs section, bullet item 2; Change the word "water" at the end of the sentence to "stormwater". This should read, "Store all material so that it cannot come into contact with stormwater."	Seattle
181	S444 BMPs for the Storage of Dry Pesticides and Fertilizers	In the Applicable Operational BMPs section, bullet item 7; this BMP advise to not discharge pesticide wastes to the storm sewer. This should also remind user to not discharge this waste to the sanitary sewer. This should also advise the same precaution for fertilizers.	Seattle
182	S446 BMPs for Well, Utility, Directional and Geotechnical Drilling	In Applicable Operational BMPs, bullet item 8; "Keep all sediment-laden water out of storm drains and surface waters. If sediment-laden water does escape from the immediate drilling location, block flow to any nearby waterways or catch basins using fabric, inlet protections, sand bags, erosion fences, or other similar methods." Add "Notify local utility and state agencies if sediment laden waters impact public drainage systems or local waters."	Seattle
183	S446 BMPs for Well, Utility, Directional and Geotechnical Drilling	In Applicable Operational BMPs, bullet item 10; it discusses temporary stockpiling of cuttings or soils. This should refer back to BMP S429.	Seattle
184	S446 BMPs for Well, Utility, Directional and Geotechnical Drilling	In Applicable Operational BMPs, bullet item 11; it discusses stabilizing exposed soils at the end of the project. This should refer back to BMP S425.	Seattle
185	S446 BMPs for Well, Utility, Directional and Geotechnical Drilling	In Applicable Operational BMPs, bullet item 12; states that spent drilling slurry can be dewatered on site or hauled to a disposal site. Is disposal of drilling slurry on site allowed?	Seattle
186	S447 BMPs for Roof Vents	Some of the Applicable Operational BMPs are actually structural requirements. Installing air pollution control equipment or treatment systems for roof runoff are not operational.	Seattle
187	S451 BMPs for Building, Repair, Remodeling, Painting, and Construction	In Applicable Operational BMPs, bullet item 4; identifies scofflaws as a threat to materials that are not put away or secured at the end of the day. I suggest that in addition to scofflaws; vandals, crooks, and other malefactors be added to the list of potential ruinators.	Seattle
188	S452 BMPs for Goose Waste	This BMP needs to be identified as Recommended and not Applicable.	Seattle
189	S452 BMPs for Goose Waste	Bullets 5 through 8 of Applicable Operational BMPs should be moved to Optional Operational BMPs. Scaring geese away and requiring landscaping to deter geese are should not be required.	Seattle
190	S453 BMPs for Formation of a Pollution Prevention Team	This BMP should be identified as a Recommended Operational BMP or Applicable Operational BMP.	Seattle

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191	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 1; eliminate this bullet item. This is redundant requirements found in multiple other BMPs, S410, S431, etc. This element has nothing to do with preventative maintenance or good housekeeping.	Seattle
192	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 2; this is redundant and included in BMP S455. This element has to do with spill cleanup.	Seattle
193	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 5; add second sentence, "Use mechanical sweepers, and manual sweeping as necessary to access areas that a vacuum sweeper can't reach to ensure that all surface contaminants are routinely removed." See similar comment in S421.	Seattle
194	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 7; this should be recommended or it should be an "Applicable Structural BMP". Constructing an impervious surface is more than preventive maintenance of good housekeeping.	Seattle
195	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 8; move this to BMP S455	Seattle
196	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 9; remove this bullet item, it does not address stormwater issues or may be addressed in other BMPs	Seattle
197	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 11; Move this to BMP S427. Remove the section in sentence 1, "contaminated with liquids or other potential polluted materials".	Seattle
198	S454 BMPs for Preventive Maintenance / Good Housekeeping	In Applicable BMPs, bullet item 13; this item addresses cleaning of drainage and treatment systems and should be in BMP S417. Remove from this BMP.	Seattle
199	S454 BMPs for Preventive Maintenance / Good Housekeeping	Bullet regarding paving over contaminated soil--consider deleting this bullet as it conflicts with MTCA. Perhaps it could be revised to state that if spills have contaminated soil, cleanup of the release will be completed in a manner consistent with MTCA regulations.	Seattle
200	S454 BMPs for Preventive Maintenance / Good Housekeeping	Bullet on "promptly repair or replace cracks" -- This should be an Optional BMP.	Seattle
201	S455 BMPs for Spill Prevention and Cleanup	General: BMP S455 should apply where there is high risk for spills. Specific: In Applicable BMPs, Spill Prevention, bullet item 1; Change "label" to "label or mark". Typically a label is an affixed sticker with information. DOT regulations defines a marking and a label as two distinct ways to convey information. Also define what is required to be on the label or marking.	Seattle
202	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup Kits, bullet item 1; change "qualities" to "quantities"	Seattle
203	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup Kits, bullet item 1; Remove the second sentence since secondary containment does not pertain to a spill cleanup kit.	Seattle

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204	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup Kits, bullet item 2; this is a recommended bullet item and should be added at the end of this BMP in a section identified as "recommended" to be consistent with the other BMP formats.	Seattle
205	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup and Proper Disposal of Materials; Change this title to remove the word "material" and substitute "waste". If you dispose of something then it is waste.	Seattle
206	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup and Proper Disposal of Materials, bullet item 6; add at the end of the sentence "unless the spill generated waste is removed for proper disposal."	Seattle
207	S455 BMPs for Spill Prevention and Cleanup	In Applicable BMPs, Spill Cleanup and Proper Disposal of Materials, bullet item 7; after the word "report" add "to all appropriate and necessary public agencies"	Seattle
208	S456 BMPs for Employee Training	Identify this as an Applicable BMP or Applicable Operational BMP	Seattle
209	S456 BMPs for Employee Training	Add a final bullet item that states, "Train employees upon initial work assignment in pollution source areas and annually. Document training and keep training records on file"	Seattle
210	S457 BMPS for Inspections	General: S457 should be optional for homeowners. Specific: Identify this as an Applicable BMP or Applicable Operational BMP	Seattle
211	S457 BMPS for Inspections	These are not just visual inspections if you are looking for odors. Change the term "visual inspections" to be "pollution source control inspections" or something similar.	Seattle
212	S457 BMPS for Inspections	Add a final bullet item that states, "Identify actions to address inspection deficiencies." The person conducting the inspection must sign the inspection document.	Seattle
213	S458 BMPs for Record Keeping	Remove the first bullet item sub-bullets and put them into BMP S457. This removed information identifies what items to record for a "visual" inspection in S457.	Seattle
214	S458 BMPs for Record Keeping	Change first bullet item to read, "Monthly pollution source control inspection reports."	Seattle
215	S458 BMPs for Record Keeping	Make changes to bullet item 2. Eliminate first sentence since it is captured in the second sentence anyway. Change the second sentence to begin with, "Report spills that cause:" There are many other chemicals that could be spilled that would violate the WQS.	Seattle
216	S458 BMPs for Record Keeping	Take out the section about reporting spills and add this to BMP S455 (Spill Prevention and Cleanup)	Seattle
217	V-5.2 Infiltration BMP Design Steps	Under step 3, clarify if the infiltration rate assumed is the measured or design rate	Seattle
218	V-5.3 General Design Criteria for Infiltration BMPs	The last two bullets under the Maintenance Criteria section seem to contradict each other - "The Water Quality Design Volume does not infiltrate within 48 hours" and "Water remains in the BMP for greater than 24 hours after the end of most moderate rainfall events". If the water quality design volume has 48 hours to drain, then water will remain in the BMP for greater than 24 hours after the end of the rainfall event.	Seattle

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219	V-5.3 General Design Criteria for Infiltration BMPs	Runoff Treatment Prior to Infiltration BMP's: if Runoff Treatment is required whether or not the MR6 -Runoff Treatment or the I-4 UIC Guidelines are required, why even have the fourth bullet point "If the project is proposing infiltration, but is not required to meet..." Perhaps revise this section to indicate that whether or not MR6 or UIC Guidelines are already required or not, Runoff Treatment Prior to Infiltration BMP's is required.	Seattle
220	V-5.3 General Design Criteria for Infiltration BMPs	Section: "Treatment Prior to Infiltration BMPs", has a new requirement that requires "pretreatment" to all infiltration BMPs. Installing "pretreatment" regardless of pollutants of concern or size of area draining to a LID BMP is a huge barrier to LID installation due to the added area required to install both a "basic treatment" for pretreatment as well as the actual BMP, while also maintaining gravity flow to the approved point of discharge. The Chart of Changes states that this information originated from Vol 5-2.1, which is targeting Runoff Treatment BMPs. It states that "A pretreatment BMP to remove a portion of the influent suspended solids should precede all infiltration BMPs.....Use either a basic treatment BMP, as described in III-11.2...or a pretreatment BMP as described in V-9 Pretreatment BMPs." Please edit text so that original intent applies from previous manual and that a pretreatment facility (i.e. a basic treatment facility or a presettling basin with a volume of 30% of the runoff from the 6 month 24 hour storm) is not required, for example, to meet the list approach of MR#5.	Seattle
221	V-5.6 Site Suitability Criteria (SSC)	SSC-5 Depth to Bedrock, Water Table, or Impermeable layer - why are only Infiltration Basins and Trenches listed? What about other Infiltration BMPs?	Seattle
222	V-5.6 Site Suitability Criteria (SSC)	SSC-4 Soil Infiltration Rate/Drawdown Time: clarify if there are minimum measured infiltration rates in this section.	Seattle
223	V-9.1 Introduction to Pretreatment BMPs	This section is just for larger scale BMPs and does not address BMPs such as bioretention or permeable pavement	Seattle

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224	Appendix I-D: Regional Facilities	<p>This new appendix is confusing and may have unintended regulatory consequences when the MS4 permit requires a local jurisdiction to adopt the SWMMWW or an equivalent manual. Seattle thinks that Ecology’s intent in adding this Appendix is to put guidance related to regional facilities in one location for easier reference – not to add new requirements. The new appendix appears to be primarily information pulled together from other documents with new guidance/examples on how some items can (but not must) be done. Unfortunately, the appendix is not very cohesive. Ecology’s presumed intent that the appendix is optional for MS4s’ use is not clear. We are available to discuss these comments and this draft appendix. General areas of concern are:</p> <ul style="list-style-type: none"> • New descriptions may have unintended consequences, and should be revised or removed. • The appendix must explain that it is optional guidance for MS4s that regulate development. If there are requirements and limitations for MS4s, they need to be stated in the NPDES Permit, not in the SWMMWW. Permittees have understood that a local development permitting authority is not limited by the MS4 Permit (and is in compliance) when it allows development to meet certain stormwater requirements off site, to the extent allowed by state and federal statutes and rules. If Ecology intends to change that principle, in any circumstances, it is not clear. Further the draft “Stormwater Control Transfer: Out of Basin” guidance was and is purely optional. To the extent that Appendix I-D is drawn from that draft guidance, it should also be optional, • Guidance is written as a “must do” instead of as an example of how “could be done”. This is especially problematic for MS4s that are required to regulate development; for example, the guidance and examples address solely MR7 Flow Control requirements, when in fact regional facilities are also capable of meeting MR6 Runoff Treatment requirements. 	Seattle
225	Appendix I-D: Regional Facilities	Per previous comment, Please rework Appendix I-D to make its intent and optional status clear or remove the appendix from manual.	Seattle

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226	Appendix IV-B: Management of Street Wastes	<p>General: Please carefully compare App. IV-B to the August 2018 final Solid Waste Handling Standards at WAC 173-250 and apply and quote from it; some references do not match the final version. Example: Terms "impacted soil" and "impacted sediment" are not used in the final rule and the definition and examples for "contaminated soil" have been altered.</p> <p>Specific comment: Section: Contamination in Street Waste Solids, paragraph beginning "Ecology suggests a street waste site evaluation..."</p> <p>Suggested wording: "Ecology suggests a street waste collection site evaluation (see sample at end of this appendix) for all street waste as a method to identify spill sites or locations that are more polluted than normal to prevent street waste collected from those sites from mixing with typical street waste."</p>	Seattle
227	Appendix IV-B: Management of Street Wastes	<p>Section: Contamination in Street Waste Solids, paragraph beginning "Street waste treatment and storage facilities owned or operated by governmental agencies should be"...</p> <p>Suggested wording: "Street waste treatment and storage facilities, as defined by the Solid Waste Handling Rule, owned or operated by governmental agencies should be..."</p>	Seattle
228	Appendix IV-B: Management of Street Wastes	<p>Section: Contamination in Street Waste Solids, paragraph beginning "Street waste treatment and storage facilities owned or operated by governmental agencies should be"...</p> <p>Suggested wording: "The operators of street waste facilities should restrict the use of their facilities to waste collectors certified and/or licensed by the operator or ??,who have met the operator's training and liability requirements."</p>	Seattle
229	Appendix IV-B: Management of Street Wastes	<p>Section: Contamination in Street Waste Solids, paragraph beginning "The use of street waste solids under this guidance should not lead to ..."</p> <p>Suggested wording: "The reuse of street waste solids under this guidance should not lead to ..."</p>	Seattle
230	Appendix IV-B: Management of Street Wastes	<p>Section: Contamination in Street Waste Solids, paragraph beginning "Testing of street waste solids will generally be required as part of a plan of operations ..."</p> <p>Comment: Baseline testing of leaves picked up by street sweeping near streets with high traffic volumes and/or industrial landuse may be prudent.</p>	Seattle

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231	Appendix IV-B: Management of Street Wastes	Section: Street Waste Liquids, paragraph beginning "Street waste liquids require treatment before their discharge.." Suggested wording: "Street waste liquids, which includes eductor and street sweeping truck decant and drainage from piles and containers, require pretreatment before their discharge."	Seattle
232	Appendix IV-B: Management of Street Wastes	Section: Street Waste Liquids, paragraph beginning "1. Discharge of Street Waste decant liquids to a municipal sanitary sewer..." Suggested wording: "1. Discharge of street waste liquids to a municipal sanitary sewer..."	Seattle
233	Appendix IV-B: Management of Street Wastes	Section: Street Waste Liquids, paragraph beginning "2. Discharge of Street Waste decant liquids may be allowed into a Basic or Enhanced BMP, ..." Suggested wording: "2. Discharge of street waste liquids may be allowed into a Basic or Enhanced BMP, if option 1 is not available. Only discharge solid waste liquid into the storm sewer system under the following conditions:..."	Seattle
234	Appendix IV-B: Management of Street Wastes	Section: Street Waste Liquids, paragraph beginning "● The discharge is as near to the Runoff Treatment BMP as is practical, to minimize contamination or ..." Please clarify: What discharge? From the collection site, from the eductor truck? Does this mean the eductor or street sweeper can discharge their load upgradient of the Runoff Treatment BMP??	Seattle
235	Appendix IV-B: Management of Street Wastes	Section: Street Waste Liquids, paragraph beginning "● Ecology must approve in advance flocculants for the pretreatment of catch basins decant liquids... .." Suggested wording: "Ecology must approve in advance flocculants for the pretreatment of street waste liquids."	Seattle
236	Appendix IV-B: Management of Street Wastes	Section: Site Evaluation Suggested clarification: Collection Site Evaluation	Seattle
237	Appendix IV-B: Management of Street Wastes	Section: Site Evaluation, paragraph beginning "3. A waste and container inspection before and during collection..." Suggested clarification: "3. sweeping route, catch basin, waste, and container inspection before and during collection..."	Seattle

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238	Appendix IV-B: Management of Street Wastes	A statement about street waste regulation is wrong and probably was generalized from a SW rule draft that Ecology did not adopt. The final state rule does not “classify” that any waste type is contaminated soil. To match the 2018 final WAC 173-350-100 “contaminated soil” definition, please change p. 3 to read as follows: “The Solid Waste Handling Rule classifies [[ADD]] <u>states that “examples of potentially contaminated soil may include”</u> Street Waste. [[STRIKE: as an “Impacted soil and Impacted sediment”. By this, Street Waste is determined to contain one or more contaminants at concentrations above unrestricted screening levels, but it is not a dangerous waste.]] ”	Seattle
239	Appendix IV-B: Management of Street Wastes	Please delete a definition that is not in the final 2018 SW Rule: [[STRIKE: “Clean soils are defined as “soils and dredged material which are not dangerous wastes, contaminated soils, or contaminated dredged material” (WAC 173-350-100).”]] Also, please review and correct all SWMMWW summaries about clean and contaminated soil, which Ecology has now chosen to define in the SW Rule in terms of “release” or where the soil is moved.	Seattle
240	Executive Summary of Volume V	It is confusing to not have the BMP numbers match the manual locations. Please consider renumbering BMPs to be consistent with location in the SWMMWW.	Seattle
241	I-4 UIC Program Administration and Design Guidelines	Draft UIC guidance became confusing and possibly overreaching when it was transferred from separate guidance to SWMMWW. Seattle recommends that Ecology remove Vol. I-4 from the SWMMWW and conduct separate UIC rulemaking to address any UIC program objectives. If not, then Seattle is available to discuss concerns and necessary redrafting for Vol. I-4.	Seattle
242	I-4 UIC Program Administration and Design Guidelines	Vol. I-4 is guidance, not a rule. It cannot create requirements. (State UIC requirements would be created in statute, rule, or UIC permit.) Instead, Ecology should amend its UIC rule if it wants legally to impose requirements on UICs, particularly new or revised requirements such as for deep UIC wells. Rulemaking would provide the necessary public notice and opportunity to comment on new generally applicable requirements. Without rulemaking, how and when would a UIC well applicant have notice and opportunity to appeal any new requirements Ecology placed into its UIC authorization based on draft Vol. I-4? This is especially unclear for “rule authorization” apparently based on guidance rather than a rule.	Seattle
243	I-4 UIC Program Administration and Design Guidelines	Revise Vol. I-4 to clarify its limited legal authority regarding MS4 permits. The UIC program has no authority to add to an MS4 permit or bootstrap SDWA UIC program requirements. MS4 Permits explicitly do not authorize UIC wells and have separate legal authority. (Permit S2.A.1; Fact Sheet at 6.2 for S2)	Seattle

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244	I-4 UIC Program Administration and Design Guidelines	Clarify special provisions for MS4s. Vol. I-4 is inconsistent as to what parts address stormwater UIC wells generally (apparently most) vs. address only UICs wells operated by MS4 jurisdictions (apparently very little, as was true for the previous guidance). Please clarify. For example, I-4.2, from start through first four bullet points, appears to be section specific to an MS4's own wells. This was clearer in the 2006 guidance. Please note that in the 2006 UIC guidance, Sec. 2.7 is the only part specific to discharges to UIC wells by a municipality under an MS4 Permit. Therefore please reinsert the 2006/2.7 language but also delete within it the inaccurate sentence beginning, " Since the NPDES Permit does not fulfill all the requirements of the UIC program, the following must be added to the jurisdiction's Stormwater Management Program (SWMP) and implemented: " and states instead, " <u>The municipality must comply with the UIC Rule for its UIC wells, as follows:</u> " This change states Ecology's intent and avoids implying that UIC guidance can be used direct the contents of an MS4 Permit/SWMP.	Seattle
245	I-4 UIC Program Administration and Design Guidelines	Remove all draft SWMMWW language that is contrary to the UIC rule (WAC 173-218), or exceeds authority granted by the rule. For example, without rulemaking Ecology cannot alter this special allowance for MS4 jurisdiction's own new UIC wells per the final UIC rule at WAC 173-218-090(1)(c)(i)(C) (added in final WSR 06-02-065, 2/3/2006): " <i>Owners and operators of [MS4s] regulated under [1342(p) FWPCA] which also own or operate Class V UIC wells may satisfy the presumptive approach by applying the stormwater management programs developed to comply with the [FWPCA] to their new UIC wells. For new UIC wells, construction phase and postconstruction stormwater controls must be applied in accordance with applicable stormwater manuals.</i> " As Vol. I-4 is now drafted, it is not clear what Ecology intends.	Seattle
246	I-4 UIC Program Administration and Design Guidelines	The same changes re UICs are suggested for the SWMM for Eastern Washington.	Seattle
247	IV-1 Source Control BMPs Applicable to All Sites	General comment for Vol. IV: The layout of BMPs is not consistent. Subheadings include "Applicable Operational BMPs", "Applicable BMPs", "Recommended Applicable BMPs", etc. Some BMP bullet items that are identified as "Applicable" are just suggestions and should be included in "Recommended BMPs". Also, the greatly expanded BMPs are beyond what would be required for <i>all</i> sites or properties in a jurisdiction and may be intended for commercial for industrial sites (Ex. BMP S455); please clarify what Ecology means by "[SC] BMPs Applicable to All Sites."	Seattle
248	IV-1 Source Control BMPs Applicable to All Sites	Where it states in this document to comply with the Uniform or International Fire Code change this to read, "local applicable fire code."	Seattle

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249	IV-1 Source Control BMPs Applicable to All Sites	The applicability of Source Control BMPs appears to be expanded. Please add the following back from the 2014 SWMMWW: " <u>Local governments may require commercial, industrial, and multifamily properties to use the source control BMPs in this volume through ordinances or other documents.</u> " Currently, as written, it appears, for example, that "Employee Training" & "Record Keeping" applies to a single-family home.	Seattle
250	Glossary	The Glossary has added a new definition, "New Impervious Surface". The definition includes, "A surface that is upgraded from a bituminous surface treatment ("chip seal") to asphalt or concrete". Bituminous surface treatments such as chip seal already meet the definition of an "Impervious Surface" and should not be counted as a "New Impervious Surface".	Seattle
251	III-2.2 Continuous Simulation Models	The draft SWMMWW does not allow the use of MGS Flood, but states that Ecology is working with the vendor to include MGS Flood as well as Western Washington Hydrology Model (WWHM) as an Ecology Approved Continuous Simulation Model. Seattle strongly supports making MGS Flood an approved model. MGS Flood performs computations significantly faster than WWHM which greatly reduces consultant costs during design. Seattle encourages Ecology to engage Permittees and the consulting community, if necessary, so that both MGS Flood and WWHM are approved models.	Seattle