

Attachment 2

City of Bellevue February 3, 2012 Comment Letter for the Draft 2012 Draft Stormwater Management Manual for Western Washington

Technical Comments on the Manual

Comment No.	Section	Page	Comment	Alternative Language or Solution
1	Vol 1 Chap 2.3	2-8	The Rain Garden definition references the latest version of the Rain Garden handbook that has not been released.	The latest version (2012?) should be reviewed first by permittees.
2	Vol 1 Chap. 2.3	2-9	<p>Receiving Waters definition now includes groundwater to which surface runoff is directed by infiltration. This would include all LID BMPs and other infiltration BMPs.</p> <p>Outfalls are defined under the federal regulation as a point source. Infiltration, by its very nature is diffuse. The proposed amendment is inconsistent with a well-known and adjudicated term of art.</p>	<p>This is an unreasonable inclusion as a point of compliance for MS4.</p> <p>Revise the definition to read:</p> <p>“Outfall means point source as defined by 40 CFR 122.2 at the point where a municipal separate storm sewer discharges to <u>surface or ground</u> waters of the State. Outfall and does not include open conveyances connecting two municipal separate storm sewer systems, or pipes, tunnels, or other conveyances which connect segments of the same stream or other waters of the state <u>surface waters</u> and are used to convey <u>primarily surface</u> waters of the State.”</p>
3	Vol 1 Chap 2.4	2-11	Figure 2.4.1 & 2.4.2 The triggers now include new plus replaced impervious area. The chart also uses hard surfaces instead of impervious surfaces in some decision points in the chart.	Suggest dropping this definition (for hard surfaces) and use the old definition of impervious surface. Seems like there is less incentive to install LID infiltration techniques such as permeable pavement and green roofs under proposed hard surfaces definition if their areas count against the project threshold calculation.
4	Vol1 chap 2.5	2-17	This paragraph appears to conflict with the first paragraph in Chap 2.1 or at least it is confusing when one section says to use appendix 1 of the permit rather than the bold font statements and in Chap 2.5 it states the bold font statements are required?	Delete the second paragraph under Chap 2.5

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5	Vol 1 Chap 2.5.5	2-37	The minimum short-term, native infiltration rate for bioretention BMPs is required to be 0.30 inches/hour or greater. Bellevue recommends using the long-term infiltration rate with correction factor instead.	Replace short-term infiltration rate with long-term infiltration rate (with correction factor).
6	Vol 1 Chap 2.5.7	2-44	The maps for Appendix I-G are missing.	Allow adequate time for permittees to review and comment when map is available.
7	Vol 1 App I-D G.S. 1	D-3	Guide sheet 1: Includes criteria that excludes wetlands from serving as a treatment or flow control BMP/Facility	These regulations are a substantial change from the 2005 SWMMWW and could impact a large portion of the redevelopment opportunities in Bellevue. Bellevue does not fully understand the impact and would like to work out alternative approaches with Ecology that is protective of wetlands yet allows for reasonable redevelopment opportunities.
8	Vol 1 App I-D G.S. 2	D-4	Guide Sheet 2: Criteria for including wetlands as a treatment or flow control BMP/facility	We recommend that Ecology revise this section to include a state definition for no net loss of wetland function and value and establish a uniform methodology by which this is established. Ecology should also specify the kind of study needed to determine whether or not a breeding population of amphibians is present since absent direction, there will likely significant disparity across western Washington in how this will be handled.

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9	Vol 1 App I-D G.S. 3A	D-5	Guide Sheet 3A: Wetland Protection Guidelines	Many of these methods have been shown to be very effective in reducing impacts to wetlands, especially maintaining required buffers, limiting compaction, retaining connecting areas of vegetation and so on. If Ecology wants to ensure protection these requirements should be more fully defined and metrics attached to their use.
10	Vol 1 App I-D G.S. 3B	D-6	Guide Sheet 3B: Wetland Protection Guidelines	Unlike the prior manual, only very general methodology is included that specifies how monitoring of alterations of water flows is to occur. This lack of specificity may lead to grossly differing results between communities.
11	Vol 2 Chap 2.1	2-6	Bulleted item states “Construction activities covered under an that meet the requirements of an Erosivity Waiver”. The option for an erosivity waiver was removed from the permit.	Remove bullet.
12	Vol 3 chap 2.2	2-7	Ecology anticipates the next upgrade to the WWHM will include LID. This upgrade should be made before permit issuance.	Delay LID standards implementation until all technical tools are available and allow adequate time for permittees to review and comment.
13	Vol 3 chap 2.2.2	2-10	The credit for porous pavement is acknowledged as being too small. Ecology should expeditiously complete the upgrades to WWHM including larger detention credits.	Delay LID standards implementation until all technical tools are available and allow adequate time for permittees to review and comment.

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14	Vol 3 chap 2.2.3	2-12	Ecology plans to upgrade WWHM to allow comparisons with the technical criteria of Minimum Requirement #8 (discharges to wetlands). This should be complete before issuance of the permit.	Without the technical tool available it is very difficult to evaluate the new wetland requirements. Suggest delaying implementation of this requirement until WWHM is upgraded otherwise there will be uncertainty in whether applicants meet the requirements and possible delay in permit issuance. Allow adequate time for permittees to review and comment.
15	Vol 3 Chap 3.3.4	3-70	This section requires infiltration facilities must conduct performance testing to verify the facility is performing as designed. However the section does not specify how often the testing should be performed or the methods of testing.	Recommend the testing be conducted immediately after construction before acceptance by the jurisdiction. Additional testing may be conducted at the request of the jurisdiction. It is also recommended that observation ports to monitor the performance of these facilities be required.
16	Vol 3 Chap 3.3.6	3-84	A correction factor table needs a number Table 3.X?	Add correction table number.
17	Vol 3 Chap 3.3.8	3-103	Ecology is interested in comments regarding the minimum size project required to do a groundwater mounding analysis. The draft currently uses 1 acre as the size. This will be an added expense to developers and there may not be enough qualified consultants to perform these analyses. However these analyses are critical to detect off site impacts from groundwater.	Bellevue agrees with a 1 acre threshold as the size but not anything smaller. It is also recommended that some guidance be provided for the groundwater modeling analysis.
18	Vol 3 Chap 3.4.2	3-117	Ecology is requesting input on how to give guidance to designers to take a broader view of the site where infiltrated water will travel (e.g., groundwater coming out of cut slopes).	Recommend that a check list of concerns be developed to alert the designer/city of these potential concerns. Each site is unique and professional judgment will need to be exercised by the design professional. This guidance should be in the site planning and layout section.

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19	Vol 3 Appendix III-B	B-1	This appendix has not been updated for LID modeling capabilities.	Update the appendix before issuance of the permit and allow adequate time for review and comment.
20	Vol 3 Appendix III-B	B-7	Ecology intends to update the LID credits in WWHM in 2012.	The credits need updating and should be peer reviewed before the update occurs.
21	Vol 3 Appendix III-C	C-3	Ecology asks the question for permeable pavements where there are multiple infiltration tests are averaged to determine an average infiltration rate should a site variability correction factor be used.	No, if the average was weighted by the area. It seems you would be introducing a correction factor upon a correction factor otherwise.
22	Vol 3 appendix III-C	C-5	The manual is missing the list of soils for when a geotextile is recommended.	Add list of soils or alternately add filter criteria.
23	Vol 3 Appendix III-C	C-23	Ecology asks whether a site variability correction factor should be used for bioretention facilities that have an average computed for multiple infiltration tests.	No, as long as the average was weighted by area.
24	Vol 5 Chap 5.4.6.	4-33	Infiltration Storage Area: Maintenance standard does not include requirement for assuring long term functionality of infiltration.	Recommend requirement to perform engineered percolation test every 5-10 years to assure facility meets design standards long term.
25	Vol 5 Chap 5.4.6.	4-33	Guidance on appropriate infiltration times for triggered maintenance not provided.	Define appropriate time allowed for infiltration. 24hrs? 48hrs? After rain stops? Bellevue suggests 48 hours as the trigger.
26	Vol 5 Chap 5.4.6.	4-42	Wet ponds, general requirements. No definition of sediment zone provided.	Define "sediment zone". This term is not in the glossary and needs to be defined so we can communicate the standard to the public.

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27	Vol 5 Chap 5.4.6.	4-43	Wet Vaults, general requirements. No definition of sediment zone provided.	Define "sediment zone". This term is not in the glossary and needs to be defined so we can communicate the standard to the public.
28	Vol 5 Chap 5.4.6.	4-45	Sand Filters, Below Ground. No definition of sediment zone provided.	Define "sediment zone". This term is not in the glossary and needs to be defined so we can communicate the standard to the public.
29	Vol 5 Chap 5.4.6.	4-46	Storm Filters. Standard only recognizes one type/brand. Standard conflicts with manufacturers recommendations.	Needs to be updated to current technology standards and the different types of filter media available. E.g: Compost filter media - standard says draw down 1 hr and the manufacturer states 24hrs. Bellevue suggests per manufacturer's recommendations.
30	Vol 5 Chap 5.4.6.	4-48	Coalescing plate oil/water separators. Standards does not maintenance requirements for media pack or plates themselves	Develop maintenance standards/guidance regarding maintenance requirements for media pack and plates.
31	Vol 5 BMP T5.30	5-22	Missing the text for native vegetative landscaped areas. The manual says it will be in the final version.	Provide text in final manual and allow opportunity for commenting on language.
32	Vol 5 BMP T7.30	7-12	The manual recommends the maximum side slopes for planted bioretention facilities is 3H:1V.	Bellevue recommends, where approved by the engineer, the side slope maximum can be 2.5H:1V.
33	Vol 5 BMP T7.30	7-13	The manual recommends that the maximum pool draw down time allowed is 24 hours.	Bellevue recommends a maximum draw down time of 72 hours as approved by local jurisdictions.
34	Vol 5 BMP T7.30	7-16	The filter fabrics section states "Do not use filter fabric between the subgrade and the BSM". In some situations it may be appropriate.	Recommend the language be revised to allow filter fabric if specified by the engineer.
35	Vol 5 BMP T7.30	7-18	Three figures are mentioned but are not provided on this page.	Provide the missing figures and allow permittees adequate time to review and comment.

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36	Vol 5 BMP T7.30	7-19	This page references some figures on planting that are missing.	Provide the missing figures and allow permittees adequate time to review and comment.
37	Vol 5 BMP T7.30	7-20	Second paragraph under “Excavation” states that “Exposed sidewalls should be no steeper than 3H:1V.”	Recommended language, “Exposed sidewalls should be no steeper than 3H:1V except where approved by the engineer they may be 2.5H:1V as approved by local jurisdictions.
38	Vol 5 BMP T7.30	7-25	The manual references Appendix V-B which is missing.	Provide the missing appendix and allow the permittees adequate time to review and comment.
39	Vol 5 BMP T7.40	7-28	Under the section “Design Modeling Method” the manual states that the CAVFS will have an “Element” in the approved runoff models.	Provide the element in WWHM so that applicants and cities can use this BMP and allow adequate time for the permittees to review and comment.
40	Vol 5 BMP T7.40	7-28	Under the maintenance section triggers should be provided for when maintenance should occur. The manual also states that the life cycle of this BMP is unknown which may limit this BMPs use.	Provide maintenance triggers for when maintenance is required for this BMP to function.