City of Tacoma 2014 NPDES Permit Modification Comments

Phase I Permit

General

1. Tacoma's Stormwater Management Manual is currently under review for equivalency to Ecology's 2014 SWMMWW per the required permit schedule. Please clarify how the process of equivalency and the permit required timeline will be affected by the permit modification process.

Section S.5.C.2.a.i (Page 13 of 77 – Redlined Version)

2. Per the *Draft Municipal Stormwater Permits – Revised definition explained*, page 6 (MS4-Mapping paragraph), "It is not Ecology's intent to require permittees to map features or areas that provide inadvertent infiltration as discharge points."

   Permit Section S.5.C.2.a.i & v. states: "Ongoing Mapping: Each Permittee shall maintain mapping data for the features listed below:

   i. Known MS4 outfalls and discharge points…

   v. Tributary conveyances to all known outfalls and discharge points with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems."

   The mapping requirement as written in the Permit would include conveyances that may inadvertently infiltrate and therefore contradicts Ecology's intent statement. Tacoma recommends revising Permit Section S.5.C.2.a. as follows in order to incorporate Ecology's intent:

   i. Known outfalls and discharge points (except features or areas that may inadvertently infiltrate stormwater).

   v. Tributary conveyances to all known outfalls and discharge points (except conveyance features or areas that may inadvertently infiltrate stormwater) with a 24-inch nominal diameter or larger, or an equivalent cross-sectional area for non-pipe systems.

Section S.5.C.9.d.i.(2) (Page 36 of 77 – Redlined Version)

3. Per the *Draft Municipal Stormwater Permits – Revised definition explained*, page 6 (MS4-Mapping paragraph), "It is not Ecology's intent to require permittees to map features or areas that provide inadvertent infiltration as discharge points."

   Permit Section S.5.C.9.d.i.(2) states: "Include an inspection of the catch basin immediately upstream of any system outfall or discharge point, if applicable."

   It is Ecology's stated intent that Permittees not map features or areas that provide inadvertent infiltration as discharge points. It is unclear if Ecology intends for the Permittee to inspect

catch basins immediately upstream from features or areas that provide inadvertent infiltration as part of Permit Section S.5.C.9.d.i(2). Please clarify.

Definitions (General)

4. Provide a definition for "discharge". The term is used in the newly modified definitions of outfall and receiving waterbody but not specifically defined.

5. Provide a definition for "facilities". The term is used in the definition of outfall and receiving waterbody but not specifically defined.

6. Provide a definition for "dispersed flow". The term is used in the definition of receiving waterbody. It is unclear if there is a flowpath length associated with dispersed flow.

7. Provide a definition for "naturally occurring surface water bodies" and "reconstructed surface water bodies". This term is used in the definition of "receiving waterbody" but not specifically defined.

8. Provide a definition for "ground" as it relates to the definition for discharge point ("discharges to ground"). Clarify if "ground" is intended to mean "ground water." This may help clarify Ecology's mapping intent.

Definition (Page 70 of 77 – Redlined Version)

9. The definition for "conveyance system" states: "means that portion of the municipal separate storm sewer system designed or used for conveying stormwater". Page 6 of the *Draft Municipal Stormwater Permits – Revised definition explained* states, "Stormwater conveyance is broadly used to indicate private or public stormwater infrastructure." The intent document appears to contradict the definition (municipal in definition – private and public in intent).

   In addition, it appears that the definition of MS4 encompasses only the conveyance system and does not encompass any stormwater facilities such as stormwater treatment and flow control facilities. Please clarify all definitions and intent.

Definition (Page 74 of 77 – Redlined Version)

10. Revise the definition for "outfall" as follows. (Note: proposed changes are shown as red strikethrough text or insert text.)

    "Outfall" - a point source as defined by 40 CFR 122.2 at the point where a discharge leaves the Ppermittee's MS4 and enters a receiving waterbody or receiving waters.

Outfall also includes the Ppermittee's MS4 facilities/BMPs designed to infiltrate stormwater.

Definition (Page 76 of 77 – Redlined Version)

11. The definition for SWMMWW was modified to state "as amended in 2014". Revise language to state "Stormwater Management Manual for Western Washington" means the May 2014 Stormwater Management Manual.

12. Add SWMMWW means the Stormwater Management Manual for Western Washington.

Appendix 9 (Page 4 of 14 – Redlined Version)

13. Remove grain size as a parameter for stormwater sampling for outfall characterization. Grain size analysis is appropriate only for sediment monitoring. Grain size analysis for water samples would require a significant volume of water and would not provide any additional valuable information for stormwater outfall characterization.

Appendix 9 (Pages 4 and 5 of 14 – Redlined Version)

14. The list of individual PAHs for stormwater and sediment analysis are not consistent:
    A. Revise the stormwater analyte list in the bullet on page 4/14 by adding 2-methylnaphthalene and replacing benzo(b)fluoranthene and benzo(k)fluoranthene with benzo(b,k)fluoranthenes; and
    B. Revise the sediment analyte list in the bullet on page 5/14 by adding acenaphthene, acenaphthylene, anthracene, benzo(b,k)fluoranthenes, dibenz(a,h)anthracene, fluorene, and indeno(1,2,3c-d)pyrene, and removing benzo(b)fluoranthene and 2-6 dimethylnaphthalene.

    The final analyte list for both stormwater and sediment samples should include the following PAH compounds: 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, benzo(b,k)fluoranthenes, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene and pyrene.

Appendix 9 (Table A9-2 – Redlined Version)

15. Table A9-2 lists the analytical procedures for outfall discharge monitoring for stormwater characterization. Both particle size distribution and grain size should be removed from the list. Particle size distribution is appropriate only to BMP monitoring for treatment system evaluation. Grain size analysis is appropriate only for sediment monitoring. Grain size analysis for water samples would require a significant volume of water and would not

provide any additional valuable information for stormwater outfall characterization. With the removal of particle size distribution, the added attached method for Wet Sieving and Mass Measurement For Laser Diffraction Analysis should also be eliminated from Appendix 9.

Municipal Stormwater Permits – *Revised definitions explained* (Draft Definition Guidance)

General

1. Throughout the document use Permittee instead of permittee. Permittee with a capital P is used throughout the NPDES Permit.

2. Throughout the document use the term ground water instead of groundwater as the permit uses ground water or change the permit to use the term groundwater.

Page 1, Last Paragraph

3. The Draft Definition Guidance states, "There are two important aspects of the definition of *waters of the state* that affect the terms and conditions in the Washington State Municipal Stormwater Permits: 1. Waters of the state includes groundwater. 2. Waters of the state include stormwater, such as that found within municipal stormwater systems."

   RCW 90.48.020 states, "Wherever the words "waters of the state" shall be used in this chapter, they shall be construed to include lakes, rivers, ponds, streams, inland waters, underground waters, salt waters and all other surface waters and watercourses within the jurisdiction of the state of Washington."

   RCW 90.48.020 does not include reference to stormwater that may be found within municipal stormwater systems. Remove item #2 or revise language to avoid confusion. As written, it appears that Ecology interprets the definition of *waters of the state* to include stormwater conveyance systems. If Ecology interprets the definition of *waters of the state* to include stormwater conveyance systems, provide basis for this interpretation.

Page 2, second solid bulleted paragraph, last sentence

4. Revise the following sentence (note, proposed changes made in red) for clarity. "~~This makes sure~~ The new definition ensures that permit requirements will apply ~~be applied to areas that~~ to discharges to surface waters ~~as well as in areas that discharge to~~ and ~~groundwater.~~ ground water."

Page 4, second bullet

5. It is stated, " "at the point where" further clarifies this is a point, and excludes conveyances that have no outlet (such as dispersion BMPs).". The City disagrees that dispersion BMPs have no outlet. Dispersion trenches, splash blocks, level spreaders, etc. have a specific outlet designed to disperse flows. The City recommends revising the sentence to read: "at the point

where" further clarifies this is a point, and excludes conveyances that are not designed to infiltrate but may discharge flow on the ground.

Page 6, MS4 MAPPING paragraph

6. It is stated, "Strict application of the agreed upon settlement language results in a requirement to map locations of inadvertent infiltration (such as ditches) as discharge points. It is not Ecology's intent to require Permittees to map features or areas that provide inadvertent infiltration as discharge points. Nor is it Ecology's intent that Permittees must re-label previously mapped outfalls as discharge points according to the new definition, although this may be helpful for permittees' programs."

   Permit Section S.5.C.2.a.i, S.5.C.2.a.v, S.5.C.9.d.i.(2) and any other relevant Permit sections should be rewritten to clarify Ecology's intent. See Permit Comments 1 and 2 above.

Figures – General

7. Use similar symbology and terminology amongst all figures. For example, Figures 3 and 4, use a star to denote a discharge point whereas Figure 1 uses the actual words and Figure 1 uses the term MS4 conveyance where Figure 2 just states MS4.

8. Consider marking all points that are required to be mapped per S5.C.2 with a specific color or a specific symbol.

9. On one or more of the figures, provide an example of what a Permittee is required to map for S5.C.2.b.iv (connections between stormwater treatment and flow control facilities with associated emergency overflows).

Figures 1-5 (Page 8-12)

10. See Attached proposed figure modifications.

Appendix B: Statement of Basis for Modifications

1. See the comments associated with the Draft Definition Guidance.

Stormwater Management Manual for Western Washington

Volume V, Section 4.1.4 – Minimum Treatment Facility Size (Page 44 of 331-Redlined Version)

1. Provide the basis for the minimum facility sizes for "conventional treatment systems." Provide a definition for conventional treatment systems. It appears that the intent of this recommendation is to limit the size of "conventional facilities" while increasing the size of Low Impact Development BMPs. Increasing the size of low impact development BMPs contradicts the general principles behind LID that facilities will be small and dispersed. The

City recommends removing this recommendation from the manual or providing additional language.

If the recommendation is maintained in the manual, the following revisions for grammar and clarity should be made to the second paragraph:

"For volume-based treatment systems, the minimum size recommended size is 0.0093 ac-ft."

"A second option is to build the conventional treatment facility using the minimum volume or flow rate cited above (whichever is applicable for the selected treatment type)."

Volume V, BMP T5.14B and BMP T5.15

2. The option for designating areas as infeasible for bioretention facilities and permeable pavement facilities should be extended to all best management practices that rely on infiltration.

Volume III, BMP T5.10B: Downspout Dispersion Systems (Page 42 of 180 Redlined Version) and Volume V, BMP T5.12: Sheet Flow Dispersion (Page 114 of 331-Redlined Version)

3. For all types of dispersion covered in these BMPs, a flow path longer than the minimum design criteria is required to utilize a Flow Credit. In the case of BMP T5.10B, the design criteria for dispersion trenches requires a minimum of 25 foot long vegetated flowpath and the design criteria for splash blocks requires a 50 foot vegetated flow path. To receive the flow credit, the flow path must be either 25 to 50 feet or 50 feet or larger, allowing these types of dispersion BMPs to always achieve the minimum flow credit when they are designed per the design criteria and at most requiring an increase of flow path by a factor of two (in the case of downspout dispersion trenches to achieve the maximum flow credit).

   The design criteria for sheet flow dispersion requires a 10 foot wide vegetated flowpath. However, to utilize the flow credit the flow path must be either 25 to 50 feet or 50 feet or larger. This is a flow path increase of a factor ranging from 2.5 to 5 to utilize flow credits for sheet flow dispersion.

   The SWMMWW appears to provide preference to single point discharge dispersion systems (such as dispersion trenches and splash blocks) over sheet flow dispersion. Provide the basis for the new criteria.

   In addition, the language of the "headers" between the two BMPs is not consistent. In BMP T5.10B, the section is labeled "Flow Credit for Roof Downspout Dispersion" and in BMP T5.12, the section is labeled "Runoff Modeling". Please revise headers to be consistent.

Volume V, Chapter 5 (Page 128 of 331 – Redlined Version)

4. Provide a definition for "roads and areas that bear very low traffic volumes or very low truck traffic". The manual states several examples of roads and areas that would "generally" fall within the definition but does not specifically provide a definition, leaving the definition open for interpretation and unequal application of the infeasibility criteria.

Volume V, Chapter 6, Pretreatment (Page 157 of 331 – Redlined Version)

5. The BMP menu for pretreatment is very limited. The City recommends adding guidance that any BMP can be used as a pretreatment option at a portion of its water quality design size. This will allow facilities that can more closely mimic the overall design aesthetic of the system.