

# City of Tacoma

Please see Attached File for All City of Tacoma Comments.

## City of Tacoma Comments on 2019 Preliminary Drafts

### General Permit Comments

1. Ecology should consider including intent statements before each permit section so all Permittees understand the goal of each Permit section.

### S5.C.2 – Mapping

1. Page 2 of 6: It is unclear why Ecology believes they are correcting an “error in the 2013 permit which inadvertently narrowed the scope of mapping”. The 2007-2012 Permit language included the term stormwater treatment and flow control in Section S5.C.2 of that Permit and the 2013 Permit clarified the term by adding a definition so that LID facilities would not be required to be mapped because of time constraints. It appears that the proposed definition of “permanent stormwater facilities” would require jurisdictions to map all stormwater facilities including onsite stormwater management BMPs – which could include things such as splash blocks and even possibly the use of BMP L613 whether or not they were designed to appropriately mitigate for stormwater. The definition needs to be expanded to include the definition of structure or device as well as what it means to control stormwater flows and remove pollutants.
2. Page 2 of 6: Consider revising the proposed definition of permanent stormwater facilities to state: providing stormwater flow control instead of “used to control stormwater flows.”
3. Page 5 of 6: Provide a definition for geographic areas served by the Permittee’s MS4 that do not discharge stormwater to surface water. The fact sheet from the 2007 Permit appears to indicate that potholes should be mapped but that is cumbersome and potentially not implementable.
4. Page 5 of 6: Stormwater treatment and flow control facilities was changed to permanent stormwater facilities in the ongoing mapping section of the Permit. This would imply that if jurisdictions were previously not mapping all stormwater facilities (just those considered to be stormwater treatment and flow control facilities) that the jurisdiction will now have to map all facilities that previously may not have been mapped. Is there a specific timeline for facility installation date that this should apply? Since the beginning of time, since the start of the 2007 permit where mapping requirements were started, or at the effective date of the new permit? Provide additional guidance as this could be a large task for some jurisdictions.
5. Page 5 of 6: Define emergency overflows and how these should be mapped.
6. Page 5 of 6: It appears that the requirement to map connections between stormwater treatment and flow control BMPs (those regulated by the Permittee) has been removed from the Permit and replaced with the only the need to map publically owned or maintained BMPs. Verify that this is accurate.
7. Page 5 & 6 of 6: Consider revising the Ongoing and New Mapping to be one section with specific dates called out for items that have a specific start date.
8. Page 6 of 6: It is stated, that “The required format for mapping is electronic with fully described mapping standards.” Will jurisdictions be required to provide Ecology their mapping standards data?

9. Under additional guidance for tributary conveyance note that catch basin leads are not required to be mapped.
10. Under Figure 5 update the language about the stormwater treatment and flow control BMP because previous language states that the permeable pavement would be mapped regardless of it was used to meet MR#6 or MR#7. In this figure, would the area contributing to the bioretention facility and the area contributing to the permeable pavement be mapped as geographic areas not discharging to surface water or would just the bioretention area be mapped because the permeable pavement (from the picture) does not infiltrate 100% of the stormwater?
11. Under Figure 7, it appears that the private outfall is required to be mapped as an outfall, is that correct?
12. In figure 11 is the Permittee required to map geographic area because this is considered to be a UIC?
13. Provide a definition for surface waters, public entities, and equivalent cross-sectional area.
14. Clarify if pipe size and/or outfall size is nominal pipe diameter.
15. Under Section S5.C.2.c it states to look at Ecology's website for example descriptions. Provide a direct link.
16. Under V of Draft Mapping Guidance there is a list of recommended mapping features. Land use is stated as recommended here but is also required to be mapped in the Permit (S5.C.2.a.v.(c) and S5.C.0.1.v.(c)). Ensure consistency in language amongst documents.

#### S5.C.5 - Controlling Runoff – Site and Subdivision Scale

1. Page 2 of 2: There should be an option of having an equivalent manual to the 2019 SWMMWW that is not required to be an amendment to the SWMMWW but can be a stand-alone document that incorporates substantive changes.
2. Annual report: The City suggests an additional permit clarification related to the tracking of enforcement actions: Number of enforcement actions taken during the reporting period (based on construction phase inspections at new development and redevelopment projects) (Permit section S5.C.5.a.v(2), (3) and (4) & Annual Report Q. 24).

The City of Tacoma enforces against both permitted construction sites without sufficient erosion and stormwater control BMPs as well as *non-permitted* construction sites that should have obtained a permit and would have had to submit a stormwater site plan and/or SWPPP. It seems like these non-permitted site enforcements also contribute to the desired outcomes of this permit section, and should be included. Additionally, it would be helpful to have a clearer definition of what constitutes a construction site that meets the thresholds. Since any site is required to employ erosion control measures under Minimum Requirement #2, it would seem that regardless of area thresholds, any construction site should be counted on the list of enforcement action counted under Annual Report Question 24.

3. Section S5.C.5.b required Permittees to update code to “require LID principles”. For future permit cycles, it is recommended to incorporate LID principles into Minimum Requirement #5 to ensure implementation.

#### S5.C.6 – Structural Stormwater Control

1. General: Can jurisdictions use partnerships to meet the S5.C.6 requirements? For example, can City of Tacoma contribute funds to a City of Seattle project and both jurisdictions will be given the credits?
2. Page 1 of 27 – Purpose: It is stated, “Qualifying projects reduce or prevent negative water quality impacts from MS4s.” Consider revising to state “Qualifying projects should aim to reduce or prevent negative water quality impacts to receiving waterbodies from MS4s.” This addition of receiving waterbodies defines the goals better.
3. Page 1 of 27 – Purpose: It is stated, “Ecology does not intend SSC projects to mitigate or compensate for previous impacts from MS4s.” This statement is confusing as some of the qualifying project types such as maintenance, restoration, and floodplain connection directly compensate for previous impacts from the MS4.” Remove statement or provide additional language as to the intent of this statement.
4. Page 1 of 27: Purpose: define retrofit
5. Page 1 of 27: Purpose: Consider changing the name retrofit incentive points to SSC Program Points or something where there is no confusion amongst other commonly used terms.
6. Page 1 of 27: Purpose: “Ecology intends...the defined level of effort to achieve...the goal of allowing comparison of runoff treatment and hydrologic benefits.” It appears that the program is normalizing or standardizing benefits, not comparing benefits. Consider revising language.
7. Page 1 of 27: Purpose: “Ecology intends...the defined level of effort...to achieve the goal of allowing comparison of project types across jurisdictional landscapes.” It appears that the program is normalizing or standardizing benefits, not comparing. Consider removing or revising the language.
8. Page 2 of 27: To avoid confusion, consider revising: “Operations and maintenance projects with large capital construction costs and projects that go beyond Permit O&M requirements.” to “Operation and maintenance projects with large capital construction costs that go beyond Permit O&M requirements.”
9. Page 2 of 27 General: It is stated, “Regional facilities that provide for use of fee-in-lieu, minimum technical requirement transfer, or other new/redevelopment-benefitting program, only partially qualify under the SSC Program; the portion of the regional facility that is preserved to address existing MS4 service area (such as roadways) may be counted in the SSC program.” What if the entire project is a roadway project – can the entire project be counted for the SSC program?
10. Page 2 of 27 General: It is stated, “Operations and maintenance projects with large capital construction costs and projects that go beyond Permit O&M requirements (ex. whole system cleaning, intensive facility maintenance/upgrades).” Define large capital construction costs and go beyond.
11. Page 2 of 27: Define source control work that goes beyond source control permit requirements.

12. Page 3 of 27: It is stated, "All qualifying projects or actions must be associated with the MS4." Further define what "associated with MS4" means.
13. Page 3 of 27 General: It is stated in Table 1: Qualifying Project Types #10, "Other actions to address stormwater runoff into or from the MS4 not otherwise required in S5.C" Clarify if land use activities (such as increasing density) or voluntary cleanup actions will qualify under Project Type #10.
14. Page 4 of 27: Define Under (5) Property acquisition to provide additional runoff treatment and/or flow control benefits, define "likely development site"; would steep slopes or other difficult to develop parcels qualify as a likely development site.
15. Page 4 of 27: Under (6) Maintenance with capital construction costs  $\geq$ \$25,000, it is unclear if this is intended to cover restoration of the existing stormwater facility to its original design or if it meant to mean maintenance that improves the facility beyond its original design.
16. Page 5 of 27: (8) "Retained from the 2007 permit, this project type is not directly related to stormwater (i.e. not driven by stormwater capital planning) but provides stormwater benefits." Could other types of habitat restoration fit here such as prairies which do not have complete forest cover but would be restored to their native condition?
17. Page 5 of 27: (9) "Floodplain reconnection projects on water bodies that are not flow control exempt per Appendix 1 (S5.C.6.a.ii(3)) – Qualifying floodplain reconnection projects will have an MS4..." Why include the language of not flow control exempt? Floodplain reconnection projects in areas such as the Puyallup River (which is considered to be flow control exempt) can have significant benefits.
18. Page 5 of 27: It is unclear if Category 10 only includes street sweeping and line cleaning. Under this category can Permittees develop their own incentive factors associated with other project types?
19. Page 7 of 27: Ecology should include permanent removal of hard surfaces and conversion to vegetation. The City recommends placing under the LID category as it is minimizing impervious surfaces. 1.25 incentive points seems appropriate.
20. Page 8 of 27: Consider making the retrofit incentive for property acquisition higher because it has a potentially very large benefit.
21. Page 8 of 27: "greater "large storm" hydrologic benefit as compared to the standard flow control requirement. More incentive points for projects that provide greater "small storm" hydrologic benefit as compared to the LID Performance Standard." Allowing more points for larger facilities that are designed for a hypothetical larger storm may create facilities that are not properly sized for the contributing area and therefore may affect the facility function which may not be a benefit so additional points may not be appropriate for oversized facilities.
22. Page 8 of 27: "More incentive points for runoff treatment projects that quantifiably address targeted pollutants, such as dissolved metals, phosphorus or other chemicals of concern." Who judges what the chemical of concern is and are they different for different waterbodies? Would basic treatment waters get more points if the facility treats something that isn't required like oil or enhanced treatment?
23. Page 8 of 27: Consider increasing the value of street sweeping and line cleaning as the benefits are similar to any stormwater technology designed to remove pollutants.

24. It is unclear how the Incentive Factors and Retrofit Incentive Points were determined. Provide a more rigorous justification for these values. The City realizes it may be necessary to form a stakeholder group in order to determine appropriate factors that may not be available before Permit issuance but the stakeholder process should be included and acknowledged in the Permit. Some specific comments on the current proposed language have been included below.

Table 2 Comments:

- a. Does a jurisdiction have to monitor stormwater discharges from a treatment facility in order to determine if it meets the water quality standards and achieve a 2.0 incentive factor? What type of monitoring? Or is a calculation used to determine compliance?
  - b. Change property acquisition to at least 1.0 times acres acquired.
  - c. Should maintenance with capital construction costs say (curb miles swept times x #events per year minus 1 event)?
  - d. Make restoration of forest cover be at least 0.5 times acres restored. Trees have been quantified as beneficial.
  - e. Are LID facilities considered only to be those small and distributed BMPs or can large regional facilities such as regional bioretention be considered to be LID?
  - f. For the maintenance section, is the area served by the maintenance activity the actual area served or an equivalent area?
  - g. Is linear feet cleaned supposed to say linear miles cleaned?
  - h. "Flow Control Benefit ratio greater than 0.8" What about equal to 0.8? Revise table to allow for equal to 0.8.
  - i. "Flow Control Benefit ratio less than 0.80 and greater than 0.5 in a known flow control problem area." Define flow control problem area. What scale of "problem"? Would a pond around a catch basin or flooding that damages property or causes longer term transportation issues be considered a flow control problem area?
  - j. "Runoff Treatment Benefit ratio less than 0.75 in a known water quality problem area" Define known water quality problem area.
  - k. "Achieves Enhanced or Phosphorus Treatment with Runoff Treatment Benefit ratio greater than 0.75" What about equal to 0.75?
  - l. "Meets LID Performance Standard". Are there incentive factors for utilizing the List Approach?
  - m. "Property Acquisition" Define what types of properties will qualify as part of property acquisition.
  - n. The City of Tacoma doesn't support the additional multipliers from footnote b because it is unknown if these watershed plans provide extra benefits.
25. Page 10 of 27 Note to reviewers: Yes, projects completed during 2023 and beyond should qualify toward future compliance.
26. Page 11 of 27: It appears that the equivalent area ratio may be the same as the benefit ratio. Ensure consistency amongst terminology. If they are not the same, include a section for how to calculate the benefit ratio and how that is used to determine the retrofit incentive points.
27. Page 11 of 27: "How to Calculate Equivalent Area" For all the calculations there should be rounding guidance. For example, at which stage of the calculation should rounding occur; how

many significant digits; how many decimal points, etc.? See the City of Tacoma SWMM language (Volume 3, Section 1.6) on rounding.

28. Page 11 of 27: "Ecology proposes the following defined level of effort for the 2019-2024 permit cycle" The level of effort should be different for each Permittee and possibly be based on population and land use cover.
29. Page 11 of 27 LID Performance Standard: Recommend changing WWHM 2012 to the most recent version of WWHM or Ecology approved equivalent model.
30. Page 11 of 27: It is unclear what land use types and percentages of cover assumptions (ex. 65% impervious) to use in the equivalent area calculations. It is recommended to provide a standard percent impervious area coverage based upon land use area (residential, commercial, etc.) so that calculations amongst jurisdictions are similar.
31. Page 12 of 27: In previous years, removing items from the Appendix 11 list required a G20 but it appears that with the annual report projects can be removed from the list. Please verify this.
32. Page 12 of 27: Can you obtain runoff treatment credits for non-pollution generating surfaces that drain to the facility or are these areas required to be subtracted from the equivalent area calculations?
33. Page 13 of 27: "The complete/maintenance-stage is appropriate for completed facility construction projects, fully executed property purchases, completed restoration projects, and implemented maintenance actions that are associated with Project Types #6 and #10." What does complete mean?
34. Page 13 of 27: Why is it necessary to include a cost estimate? This is an additional level of effort that is not necessary for Permit compliance and is not considered in the retrofit incentive points. Also, Ecology's analysis of data showed no correlation between costs and water quality benefits.
35. Page 14 of 27: "For each structural stormwater control project that you expect to result in a runoff treatment benefit (e.g., TSS, dissolved Copper, dissolved Zinc, or Total Phosphorus), calculate Runoff Treatment Equivalent Area as described above." Would oil control qualify?
36. Page 15 of 27: Why is it necessary to include lat/long? This is an additional level of effort for Appendix 11 that is already covered by the S5.C.2 mapping.
37. Page 16 of 27: M. Hoppin - It is unclear from the Permit language if the applicant has to choose to utilize project types from 6.a.i before they are allowed to utilize projects from 6.a.ii and why there would be this distinction. Recommend removing the two sections. It is unclear why a jurisdiction should not be able to achieve all their points from alternative measures if they are shown to provide a water quality benefit.
38. Page 16 of 27: General "iv. The Structural Stormwater Control program may also include a program designed to implement small scale projects that are not planned in advance." Define "small scale."
39. Page 17 of 27: It is unclear how budget and public involvement are necessary for Permit compliance. Remove these items from the planning process requirements.
40. Page 17 of 27: It is recommended that the retrofit incentive points only apply to complete/maintenance stage projects. Planning stage projects may never be constructed so will not provide a water quality benefit. Recommend changing the goal to just be 300 retrofit

incentive points and remove the design-stage component as it does not guarantee a water quality benefit and therefore does not meet the Permit goals.

41. Page 18 of 27: Remove status, cost estimate, and lat/long. See comments above.
42. Page 18 of 27: Add columns for the benefit ratios.
43. Page 25 of 27: Appendix A: Provide Ecology's complete calculations for determining the required level of effort.
44. Page 25 of 27: "Since there is no information submitted on the basin area controlled or the level of treatment and flow control provided by projects listed in the jurisdiction's tables, we assumed random values so we could calculate points." Each jurisdiction can provide the information instead of assuming random values. Consider asking jurisdictions for this information.
45. Page 26 of 27: "We assumed the average LID equivalent area equal to the average flow control ratio since we didn't have specific information in the grant database to distinguish between LID and Flow Control projects." This assumption may not be appropriate for determining the incentive points.

#### S5.C.8 IDDE Tracking and Reporting

1. It is unclear if the Permittee is required to submit the data again separately in the annual report if they have used WQWebIDDE. It seems that is the Permittee has used the Web based system that they could note this in the annual report. Please clarify.
2. The City is not currently tracking all the database fields requested by Ecology in the draft Permit language. Will Ecology be utilizing all the data obtained? The Proposal will result in an increase in inspector workload to collect data but it is unclear if/how this information will be used. Please consider both the level of effort required to collect the data and the expected usefulness in the data.
3. Page 2 of 2: The proposed language states "Attach a summary of a zipped xml file with data describing the actions taken..." There are concerns about the functionality of this type of reporting and if electronic functionality is difficult that could affect permit compliance with respect to deadlines. Please ensure that all reporting is fully functional.
4. Page 2 of 2: Please define potential illicit discharge.
5. Page 2 of 2: "WQWebIDDE": Ecology should consider developing spills/complaint database and application that will meet all requirements that can be utilized by all jurisdictions. Currently, jurisdictions spend money creating databases to store necessary data for Permit compliance at a large expense.
6. General to the proposed data fields – each field needs a clear definition.
7. Page 4 of 21: "IDDE Questions and Answers #3. Date incident reported" Consider changing to date of incident or adding a date of incident field. The date reported could be different than the incident date.
8. Page 4 of 21: "IDDE Questions and Answers #5. Date to end response – this field is unclear, please define.



9. Page 4 of 21: "IDDE Questions and Answers #6. Date of final resolution" this field is unclear and how is this different from date to end response – please define
10. Page 4 of 21: "IDDE Questions and Answers #7b. Add Discharge to sanitary sewer as an option, there are no combined sewers in Tacoma.
11. Page 4 of 21: "IDDE Questions and Answers #7b. Discharge to MS4 -No- Other" Suggest adding discharge to ground.
12. Page 4 of 21: "IDDE Questions and Answers #9. Incident location" There are privacy and confidentiality and potential for third party issues with putting an exact address into this data set. Tacoma always attempts to work with parties for cleanups and remedies. This relationship could be strained or broken if the party knows their exact information will be transmitted to Ecology.
13. Page 4 of 21: "IDDE Questions and Answers #11. Pollutants identified". There is a potential for liability if the pollutant identified is incorrect. Consider revising language. Additionally, does each separate pollutant need to be identified or just the majority pollutant?
14. Page 5 of 21: "IDDE Questions and Answers #12. Source or cause" There are so many possibilities consider making the categories larger and having less choices.
15. Page 6 of 21: "IDDE Questions and Answers #15. Correction/elimination methods: - focus on structural" Please define.
16. Page 6 of 21: "IDDE Questions and Answers #15. Correction/elimination methods: - focus on operational" Please define.

#### S5.C.9

1. The following are comments related to Section S5.C.9 of the Permit. Ecology did not propose change to this section but the City has the following comments for Ecology to consider:
  - a. Remove (1), (2), (3) from S5.C.9.a.ii and require maintenance to be completed within 1 year unless major maintenance is required. Define major maintenance as anything that requires engineering calculations to design or partially redesign the stormwater system – these maintenance items should be given 2 years or more depending upon the maintenance need.
  - b. Change Section S5.C.9.iii to a required yearly inspection to coincide with the annual inspection of stormwater treatment and flow control facilities. This will help Permittees manage their workload if all inspection types are on a similar timeline.
  - c. Under Section S5.C.9.a.ii, what are the ramifications to the Permittee if the property owner refuses to maintain their stormwater facility. Is it the Permittee's responsibility to maintain these private facilities within the given timeframe. Include additional language or allow for an extended timeframe for this scenario.
  - d. Change the inspection goals of S5.C.9.iv and S5.C.9.c.iii from 80% of all sites and 95% of all inspections to another metric. Given the current staff level, inspection staff does not have the time to provide sufficient enforcement and education to the "trouble" site owners because they are trying to achieve 80% and 95% goals. Credit should be given

for each inspection even if the inspection occurs on the same site similar to the provision in section S5.C.7.b.iii(2).

#### S5.C.10 – Education and Outreach

1. Page 6 of 9 Suggest revising the following statement to read: Each Permittee ~~shall~~ **may** implement what is developed regionally at the local jurisdiction. It could be infeasible for a jurisdiction to implement every regionally developed outreach program due to budget, staffing, inappropriate for local audiences, or other reasons. Also, does Ecology anticipate a “regional” effort would include even a program developed by two or more jurisdictions? Suggest additional clarifying language.
2. Page 6 of 9: please define what would qualify as “local water quality information” that would be used for program design S.5.C.10.b.
3. Under Section S.5.C.10.b.i, The City recommends revising “LID principles and LID BMPs” in the General Awareness section to Permanent Stormwater BMPs, including LID. LID principles and LID BMPs might not be related to local water quality and demographics for every jurisdiction and can be very specific and detailed, general awareness should include all types of stormwater facilities.
4. Under Section S.5.C.10.b.i(1), suggest leaving mobile businesses out of the general awareness section for local jurisdictions and instead recommending a regional behavior change effort. It has proven to be very difficult to find a communication method that would reach mobile businesses active in local jurisdictions.
5. Page 6 of 9: When specifying “mobile businesses” define this term and clarify how to identify this audience, such as those mobile businesses holding a business license in your jurisdiction or those with headquarters in your jurisdiction.
6. Under Section S.5.C.10.b.i(1), the first two bullet items are so closely related they seem duplicative for the general awareness messaging. Tacoma recommends eliminating “impacts from impervious surfaces” and just calling out “General impacts of stormwater on surface waters.”
7. Under Section S.5.C.10.b.ii, clarify how many of the behavior changes need to be selected: “Permittees shall select **one combination** from the following target audiences and BMPs.”
8. Under Section S.5.C.10.b.ii, suggest removing “Prevention of illicit discharges” from the list of BMPs, given that more detailed types of illicit discharges are already listed for behavior changes including household chemicals, carpet cleaning washwater, vehicle maintenance drips, pet waste, dumpster and trash compactor juice, etc. Or clarify this as “Report spills” BMP?
9. Under Section S.5.C.10.b.ii, these programs are difficult and time consuming to develop and implement. Tacoma suggests Ecology should develop example programs that the permittees can choose to implement. Ecology should have at least one program for each combination of target audience and issues.
10. Under Section S.5.C.10.b.ii, Tacoma recommends changing the language and formatting for clarity to that shown below or pairing up each audience with each specific BMP . This change is recommended based upon language in the fact sheet which seems to state that the goal of this

section is to develop a behavior change program for a single audience. The proposed change also eliminates redundancy amongst the BMPs currently listed.

ii. Behavior change. To effect behavior change, Permittees shall select one option from the target audience list and one associated option from the BMP list.

(1) Target Audiences:

- a. Residents
- b. Landscapers
- c. Property Managers
- d. Property Owners

(2) BMPs:

- a. Use and storage of automotive chemicals.
- b. Use and storage of hazardous cleaning supplies.
- c. Use and storage of pesticides and fertilizers.
- d. Use and storage of carwash soaps.
- e. Equipment maintenance.
- f. Yard care techniques protective of water quality.
- g. Carpet cleaning and auto repair maintenance.
- h. Vehicle maintenance.
- i. Home/building maintenance.
- j. LID principles and LID BMPs.
- k. Stormwater facility maintenance.
- l. Dumpster and trash compactor maintenance.

11. Under Section S5.C.10.C, provide additional guidance or language that outlines permittees responsibilities to previous efforts required in the 2013 to 2018 permit. It appears that the current language would only require one audience and one BMP program and not ongoing maintenance of existing programs.
12. Under Section S.5.C.10.b.ii, Tacoma suggests an additional update of the BMP list to align it with the technical report produced by the Puget Sound Partnership and STORM coalition: *Prioritization Tool for Puget Sound Salmon Recovery & Stormwater Individual and Residential-Scale Best Management Practices (April 2016)*. This report generated a way to prioritize the list of target behaviors according to a variety of criteria based on the expertise and experience of a large number of stormwater professionals in the Puget Sound area in order to hone in on the most effective behaviors in support of regional Puget Sound and Salmon recovery outcomes.
13. Under Section S.5.C.10.c, Suggest modifying to read: "Permittee shall conduct an ~~new~~ **new** evaluation of the effectiveness of **a locally relevant** ongoing behavior change program." It may be more helpful to evaluate a program for which we are continuing an "ongoing" evaluation process. We suggest providing at least 24 months for the evaluation. Since many behaviors are seasonal ( weather dependent), a program may need to be in effect for more than one year to get a significant number of participants and results.
14. Under Section S.5.C.10.c. i.ii.iii., options i, ii, and iii would take a very different amount of time and effort. For example, i. would only require revising your existing tool for the same audience. ii. & iii. would both require new audience research to design a new tool or pick a new audience. Developing a new strategy could require 18-24 months to complete initial audience research,

design and pilot a program. It would be wise to include time for a pilot or small-scale test before launching the program full-scale in order to avoid wasting money if the small-scale test reveals the strategy is not working well.

15. Under Section S.5.C.10.d., revise to read “No later than April 1, 2021, **begin implementing** the strategy developed in **S5.C.10.b.ii,”** so it is clear that it doesn’t mean we have to complete the program by this date.

## S8. Monitoring

1. Page 2 of 8: S8.B.1 - Note to Reviewers: Do stakeholders agree with this approach, and will it work for permittees? Tacoma agrees with this approach.
2. Page 2 of 8: S8.B.2.a - Note to Reviewers:
  - What do stakeholders think of the approach proposed below? Tacoma would like to keep the opt-out option for the 2019-2024 permit.
  - Do you have a recommendation for another approach? Another approach could be Partial opt-out with cost reduction for each site monitored: 1 site = X reduction in cost.
3. Page 3 of 8: S8.B.2.b - Note to Reviewers:
  - Reduce antecedent dry period from 24 to 8 hours: Concern that it must be shown that the outfall/site has returned to baseflow conditions indicating that the previous event is complete. Would also put undue strain on resources because every storm could be sampled.
  - Update laboratory methods as appropriate - OK
  - More clearly define sediment sampling as in-system solids sampling via sediment trap - OK
  - Add total PCBs to the runoff characterization list (using 1668C): Concerned with the total volume needed for all analyses vs limitation of sampler and sampling conditions to collect the total volume needed for all analytes.
  - Add guidance for interpreting non-detects - OK
  - Add particle size distribution - Concerned with the total volume needed for all analyses vs limitation of sampler and sampling conditions to collect the total volume needed for all analytes.
  - Add or remove other parameters as more information comes in from SAM receiving water studies – Ok but remember the consideration of sample volume collected.
4. Page 4 of 8: S8.C - Note to Reviewers: Do stakeholders agree with this approach, and will it work for permittees? Tacoma agrees with this approach
5. Page 5 of 8: S8.C.1 - Note to Reviewers: Do stakeholders agree with this approach, and will it help permittees provide the necessary data? Tacoma is OK with this approach.
6. Page 5 of 8: S8.C.3.a - Note to Reviewers: Do stakeholders agree with this approach, and will it work for permittees? Tacoma agrees with this approach.

## 2019 SWMMWW

1. Table of Contents – Volume III:

- a. In general, the idea of having a whole section of choosing BMPs seems like a good idea but without content it is hard to really comment on the concept.
  - b. Suggest removing choosing construction stormwater BMPs from Volume III and placing it in Volume II and changing the title of the Volume to Choosing, Modeling, and Documenting Your Permanent Stormwater BMPs. Consider adding a section on choosing your source control BMPs that leads the reader to Volume IV.
  - c. Consider having Stormwater Site Plans be the first section in Volume III.
2. Table of Contents – Volume IV:
    - a. Remove the Residential Source Control BMPs section. Put the BMPs for cleaning your boat into the washing section.
3. Table of Contents – Volume V:
    - a. Consider organizing the BMPs by Minimum Requirement. When organizing the BMPs by type you lose the nexus to the MRs which is the basis of the Manual. Tacoma supports including all the BMPs for permanent stormwater facilities are in this chapter but would recommend reorganizing by how the BMP would be used to meet the MRs.
    - b. Change the title to permanent stormwater BMPs. LID BMPs have no nexus to the MRs.
    - c. The downspout BMP section doesn't align well with the rest of the proposed chapter. Downspout full infiltration should fall under infiltration BMPs and downspout dispersion should fall under dispersion BMPs. Regardless, the City would like to see this chapter arranged to align with the MRs.
    - d. In the City of Tacoma, due to poor soils, bioretention is mainly used with underdrains to meet water quality requirements so its inclusion under infiltration may not be appropriate. Regardless, the City would like to see this chapter arranged to align with the MRs.
    - e. Under filtration there should be a link or mention of V-10 – manufactured facilities as these constitute a huge portion of filtration BMPs in an ultra-urban environment. Regardless, the City would like to see this chapter arranged to align with the MRs.
    - f. The Miscellaneous BMPs get lost here. Especially given that applicants are required to use some of these BMPs per MR#5. Rearrange this chapter to align with MRs.
4. Volume II
    - a. Section II-2.1: Include language that a SWPPP includes both a report and a drawing. The language makes it appear that the SWPPP is only a written report. Consider putting the language under the 2<sup>nd</sup> paragraph of Construction SWPPP Documentation Requirements (II-2.4) here.
    - b. Section II-2.2. Include when a SWPPP is required for Phase I Permittees or include a link to MR #2 where it states when one is required.
    - c. Section II-2.3. Consider adding when a Professional Engineer is required here.
    - d. Section II-2.4. The layout as a Step Process was a better way to guide applicants to prepare a SWPPP. Consider changing the title of Site Specific Considerations for Construction SWPPP Preparation to “Step 1 – Research Site Conditions” and changing Construction SWPPP Documentation Requirements to “Step 2: Prepare the SWPPP.”

- e. Section II-2.4. Include the 13 elements of a SWPPP in Volume 2. It appears that all the language that was previously contained in Volume 2 will be moved to Volume 1 under the MR section though this is unclear because Volume 1 language was not included for review.
- f. Section II-2.4. The checklist language should match the construction SWPPP narrative language exactly. Consider revising so language matches exactly.
- g. BMP C102. Consider including language about cleaning the vegetated area after construction is complete because this area is meant to be used as a filter. The BMP should include returning the area to original condition or better.
- h. BMP C120: It is stated that between October and March a straw mulch layer is required until 75% grass cover is established. The mulching BMP then goes on to state that straw has several deficiencies. Consider removing the reference to straw from BMP C120 to allow professionals to choose the mulch that makes the most sense for the application.
- i. BMP C120: Consider adding language up front about BMP T513 and MR#5 requirements. In urban areas there isn't really an opportunity for temporary seeding – the majority is permanent seeding that will typically require compliance with BMP T513.
- j. BMP C122: BMP C202: Riprap channel lining is not necessarily an alternative to nets and blankets in all situations. Remove language or add additional language.
- k. BMP C124: Consider adding language up front about BMP T513 and MR#5 requirements. In urban areas there isn't really an opportunity for temporary sodding – the majority is permanent seeding that will typically require compliance with BMP T513.
- l. BMP C125: It is unclear if utilization of BMP T5.13 is required at all sites regardless of if MR#5 has been triggered based upon the following language: "Note that this BMP is functionally the same as BMP T5.13: Post Construction Soil Quality and Depth which is required for all disturbed areas that will be developed as lawn or landscaped areas at the completed project site." Add additional clarifying language here and potentially to MR #5 as needed based upon intent.
- m. BMP C126: The language under the Conditions of Use section is misleading when compared to the language under the Design and Installation Specifications. Consider removing "In areas that drain to a sediment pond" from the following sentence: In areas that drain to a sediment pond, PAM can be applied to base soil under the following conditions. Alternatively, remove the entire section and combine it with the design and installation section as some language is similar.
- n. BMP C126: Remove the language about check dams from the second bullet. This sentence assumes that all areas less than 5 acres have channels in which to place check dams. Based upon the addition of the check dam language, it is unclear if the use of PAM is appropriate for areas less than 5 acres that go through any of the allowed sediment control BMPs (like catch basin inserts). Revise language.
- o. BMP C140: Add additional language in the PAM bullet about PAM application being required to comply with BMP C126 in terms of needing additional downstream protection.
- p. BMP C151: Revise the following sentence: "Do not wash out concrete trucks on the ground (including formed areas awaiting concrete), or into storm drains, open ditches, streets, or stream." to state: Do not wash large concrete handling equipment, including concrete

- trucks, onto the ground, into formed areas awaiting concrete, or into storm drains, open ditches, streets, streams, or any other waterbody.
- q. BMP C154: Revise the first and second bullets to replace concrete trucks with large concrete handling equipment, including concrete trucks.
  - r. BMP C160: Recommend revising this BMP to be a more generic Erosion and Sediment Control Lead then state when certification is required. It is always a good idea to have one designated person in charge of erosion and sediment control and in specific situations ensure this person has been appropriately certified. Additionally, consider if it is appropriate to include information related to sampling and the CESCL program within this BMP since those items may change at different times than this document. Consider referencing program website and the construction general permit and remove a lot of language from this BMP.
    - o Revise the second sentence under purpose to: The designated person shall be responsible for ensuring compliance with all local, state, and federal erosion and sediment control and water quality requirements.
    - o Revise the first portion of Conditions of Use to: Projects required to obtain an NPDES Construction Stormwater Permit are required to have a certified professional: either a Certified Erosion and Sediment Control (CESCL) or Certified Professional in Erosion and Sediment Control (CPESC) available.
  - s. BMP C200: Under the design calculations section it states to use the developed condition for the determining the flowrate then goes on to state to use the worst-case land cover condition which may be different than the developed condition. Revise language for consistency.
  - t. BMP C201: Under conditions of use remove the first sentence. This BMP is not containment BMP.
  - u. BMP C201: Under the design calculations section it states to use the developed condition for determining the flowrate then goes on to state to use the worst-case land cover condition which may be different than the developed condition. Revise language for consistency.
  - v. BMP C201: Under the Design and Installation section it is stated that established vegetation is required before the channel can be used unless nets and blankets are used. This contradicts with the bullet under conditions of use that says that vegetation must be well established before water is allowed to flow. Additionally, if the channel is not vegetated but just stabilized it should not be considered to be a grass-lined channel. Remove this sentence as it is redundant and in conflict with the sentence under the conditions of use section.
  - w. BMP C204: Under the design calculations section it states to use the developed condition for the determining the flowrate then goes on to state to use the worst-case land cover condition which may be different than the developed condition. Revise language for consistency.
  - x. BMP C209: It is unclear if the first bullet under design installation and specifications is specific to culverts. Revise if the outlet protection length is meant to apply to all outlets not just culverts. The language also assumes that all discharges are entering a channel.

- y. BMP C236: In the purpose, the new language suggests that vegetative filtration can only be used if the stormwater runoff first passes through a sediment pond. If this is the intent, add this bullet to the conditions of use or design criteria section.
- z. BMP C240: Under the conditions of use section, it is unclear if the inclusion of the term flow control BMP is intended to limit the use of other permanent stormwater BMPs for use as sediment traps. It is also unclear why using the footprint of a wetpond or bioretention facility is not appropriate as long as the BMP is appropriately cleaned before it is brought to its final condition. It is recommended to revise the language to not be inclusive. BMP C241 has language concerning infiltration BMPs that could be included here as well.
- aa. BMP C241: Consider combining BMP C240 and BMP C241 into one BMP that describes sizing based upon the contributing area.
- bb. BMP C241: It is unclear if a sediment pond is required to be installed for all sites that have a contributing area greater than 3 acres or if a combination of other BMPs can be used on these larger sites.
- cc. BMP C241: Under the conditions of use section, it is unclear if the inclusion of the term flow control BMP is intended to limit the use of other permanent stormwater BMPs for use as sediment traps. It is also unclear why using the footprint of a wetpond or bioretention facility is not appropriate as long as the BMP is appropriately cleaned before it is brought to its final condition. It is recommended to revise the language to not be inclusive.
- dd. BMP C241: Consider adding additional language as to how to size baker tanks and pumps for baker tanks to this section. Baker tanks are more likely to be used in urban areas.

**The following are additional comments that are not related to the proposed redlines but are related to various sections of the existing SWMMWW.**

5. BMP S406 (Deicers): Consider revisiting the language about the use of urea and sodium chloride in the SWMM. Currently the Pacific Northwest Snowfighters has a Qualified Product List that is a common site used by municipal street workers. Consider including reference to this website.
6. Biofiltration Swale Sizing. Review and update the biofiltration sizing section as needed. Currently, King County, Ecology, City of Tacoma, and WSDOT have different sizing “instructions” for biofiltration sizing. Tacoma recommends utilizing the WSDOT sizing table because it is straightforward and easily reviewable.
7. Pretreatment. It is stated in Step 3 (page 2-6) of the SWMM, “Infiltration treatment facilities must be preceded by a pretreatment facility.” Practically, a pretreatment facility does not make sense for all facilities that infiltrate and provide treatment. Consider revising the language as it was likely written for infiltration trenches and infiltration ponds. Specifically consider rewriting to exclude permeable pavement and bioretention.
8. Volume 5, Enhanced Treatment (V-3.4): The numbering scheme is not correct for the enhanced treatment; it appears that the industrial, commercial sites, etc. is associated only with infiltration for flow control facilities. Revise for accuracy.
9. Enhanced Treatment. Should enhanced treatment be more broadly utilized (i.e. for marine discharges) given the available science on saltwater fish and other aquatic life?
10. Ecology should consider adding guidance or creating additional documentation about MR#5 and its applicability to the Asarco Smelter Plume.



11. The language in the guidance document for MR #8 needs to be updated to avoid confusion. For example, the language in the guidance is not clear about which requirements apply to which wetland types. Consider updating language for clarity.
12. Consider adding language about what surface type artificial lawn should be considered. Currently, projects that propose replacing a natural lawn area with an artificial lawn area would trigger only the land disturbance thresholds and therefore would never need to provide flow control or water quality though the change would likely contribute different pollutants to the downstream system. Additionally, there is no guidance about the installation of underdrains and the increase in flows.
13. Consider adding a “change of use” threshold to the SWMM. Currently if a building is razed to leave behind a parking lot the thresholds for water quality would not be met even though there is essentially a new pollution generating hard surfaces created.
14. Consider adding language in the SWMM about the use of reclaimed asphalt pavement as a gravel type surface. Research shows that asphalt grindings can leach PAHs and heavy metals in stormwater runoff.
15. Provide a definition for every term contained in the MRs to avoid confusion and inconsistency amongst jurisdictions: terms include: aquatic life use, basin, bituminous surface treatment, chip seal, connection, industrial site, landscaped area, lawn area, new hard surface, new impervious surfaces, removed impervious surface, road related project, retrofit, significant, significant source.
16. Consider adding additional language or separate guidance documents for the term project. The current definition does not talk about vesting or piece-mealing to avoid stormwater mitigation requirements.
17. Are the following considered to be pollution generating surfaces: dog runs, deck areas adjacent to swimming pools that drain to the stormwater system?
18. Add guidance on rail projects and surfaces – what is considered to be a pollution generating, etc.
19. Consider making voluntary cleanup projects such as Asarco Smelter Plume Yard Remediation project exempt from the Minimum Requirements (except MR#2) of the SWMM.
20. Consider revising the oil control thresholds in the SWMM. Currently, a large building with multiple car trips per day (such as a retail building) will not trigger oil control whereas a smaller building with multiple car trips per day (such as a convenience store) will trigger oil control.
21. Consider updating the bioretention specifications. As written, the language is cumbersome and many applicants are saying they are not able to find a soil mix that fits exactly within every parameter provided. Is it necessary to include all parameters in the text or can they be consolidated? Also, it is unclear if every aspect is vital to bioretention function. Consider using WSDOT specifications instead of creating new specifications.
22. It is assumed that emerging technologies that receive a use level designation are incorporated into the SWMM and the Permit but the language within the use level designations is not always consistent with Permit language. For example, TAPE approved facilities, have monthly inspection requirements but the Permit has yearly inspection requirements. Add clarifying language to the emerging technologies section.