Pierce County
Planning & Public Works
piercecountywa.org/ppw
2702 S 42nd Street Suite 201, Tacoma, WA 98409

January 18, 2018
WP63914

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

RE: Pierce County Informal Comments Regarding Preliminary Draft Language and Guidance for 2019 Municipal NPDES Permit

Dear Ecology:

Thank you for the opportunity to provide informal comments on the preliminary draft language for the 2019 Municipal NPDES Permit. We will send additional comments by February 2, 2018 on the long-term municipal stormwater planning section.

If you have any questions, feel free to contact me at (253) 798-2467 or cvince2@co.pierce.wa.us.

Sincerely,

Carla C. Vincent

Carla C. Vincent
Water Quality Manager (interim)

CCV:kj

c: Melissa McFadden, Assistant County Engineer - Stormwater
NPDES file

Pierce County Comments to WA Department of Ecology Regarding Draft Language and Guidance for 2019 Municipal NPDES Permit – January 18, 2018

Thank you for the opportunity to provide informal comments on the preliminary draft language for the 2019 Municipal NPDES Permit. The page numbers shown in parentheses refer to the subject-specific draft documents released by Ecology, available at: https://ecology.wa.gov/Regulations-Permits/Permits-certifications/Stormwater-general-permits/Municipal-stormwater-general-permits.

Special Condition S5.C.2 – Mapping Requirements

1. (Page 1) Proposal – Regarding the language, *Ecology will commit to working with permittees to voluntarily associate outfall data with NHD reach and measure and load into the Water Quality Atlas during the 2019- 2024 permit cycle*:
    a. Not all outfalls will discharge to a NHD stream/reach. Many outfalls are to surface receiving waterbody (i.e. lakes), not just surface receiving waters, so how will these be attributed?
    b. The NHD is not a dataset that each jurisdiction uses, as it is less accurate than the local data. However, the more common use of the NHD among Permittees could serve to convene everyone around an appropriately standardized approach; and given the more customized, open-ended opportunity for delineating the smaller HUC 14 and 16 tributary basins based on the use of local data, it would be sensible and efficient to work within the NHD framework)
    c. What is meant by the term "measure"? What does Ecology plan on measuring when loading outfall data? Are these continuous and/or instantaneous concentration-based measurements of specific WQ parameters or perhaps turbidity and TSS with appropriate outfall flow-based calibration?)
    d. This approach overall needs to be well-defined as it will likely become a requirement in subsequent permits.

2. (Page 1) The proposed permit edits and approach for Phase 1 – Begin mapping the tributary conveyances to outfalls (with a size of 24" or greater) in rural areas of the county not previously mapped in the previous permit cycle. Previous permit requirements only required the mapping of these features in the urban/higher density rural sub-basins. Comments on the timeframe provided are requested; and New Mapping (Page 6) - ix.ii. No later than four years from the effective date of this permit, Counties shall map tributary conveyances, as described in S5.C.2.a.v., for areas not mapped under the previous permit cycle:

    a. Pierce County believes this proposal represents an additional unnecessary obligation that is both inappropriate, overbearing and unaffordable. The GIS desktop analysis and field work necessary to update and correct the MS4 mapping of tributary conveyances w/ outfalls (24" or greater) in the urban/higher density rural sub-basins of the jurisdiction requires considerable resources and staff capacity. The County's ongoing mapping update work has required considerable contractor and staff resources, and yet

this product still needs further refinement to reach its needed utility. The nature and magnitude of the work limited the ability of the County's progress in reaching its total urban/higher density rural sub-basins area targets within a specific Permit cycle time frame.

We fully appreciates the ultimate importance this MS4 map perfecting work will make available moving forward, this work product will provide enduring value and programmatic advantages well into the future. This accuracy updating and attribute correction work will provide the County increased opportunities for integrating its SWMP programs, and it will serve to increase the effectiveness of managing WQ violation risks, as well as applying more useful stormwater planning and monitoring tools (e.g. source detection and bracketing) to support greater levels of programmatic effectiveness.

Our concern is Ecology may not fully appreciate the expense and resources this effort requires, and the currently offered definitions and guidance has are limited. For example, field work has revealed many difficult to answer scenarios which the County had to develop rational methods to resolve. Our concern is Ecology must not layer on another significant amount of work, but instead maintain the current Permit's goals to conduct an "ongoing program" to achieve MS4 jurisdiction wide mapping goals.

b. The term "begin mapping" does not establish a standard of when the mapping should be completed or what type of mapping would be considered applicable to meeting the requirement. The county has drainage inventory and LiDAR which are all necessary to "begin" mapping, would this meet the permit's expectations?

3. (Page 2) - Introduce new term "permanent stormwater facilities" -
    a. This definition needs further distinguishing clarification as to specifically which structural stormwater controls. As written, it could inadvertently be construed to include Ecology's BMP T5.13 (Post Construction Soil Quality and Depth) as a means for providing on-going parcel scale treatment of pollutants. However, the County believes this BMP is outside the MS4 and it's not a structural stormwater control which requires mapping under the NPDES Permit (i.e. it's inappropriate to map every application of recovered and amended soil required post development unless it's being tied to LID BMP T5.30 and MR#5).

    b. This definition needs to more firmly clarify what is and is not considered permanent, (i.e. temporary construction BMPs that are removed after land disturbing activities or after the site is stable are not permanent).

    c. The data standards on the "description of standards" link appear to conform to Pierce County's current spatial standard, except there is an accuracy standard listed of +/- 40 feet which is equivalent to 1:24,000 on the National Map Accuracy Standard.

d. Permittees should be given time to assess how much of their current work meets these standards, in order to determine the needed workload to refine the precision of our current features. This could be problematic where Permittees have an object point for a feature that is larger than 80 feet in diameter.

e. This data is already collected based on S5.C.2.a.v.1 for the pipe and/or channel, the correct place for such data is with this layer as they are physical stormwater structures. An outfall originating from a man-made channel or ditch is a location or occurrence not a structure and therefore does not have size or material. (however, an end-of-pipe outfall could potentially be treated as a structure and it does have size and material attributes)

f. Placing a permanent stormwater facilities attribute or designation onto a man-made channel or ditch outfall point is an unnecessary duplication of effort and not useful. This also changes the data schema and will be difficult to manage overtime.

4. (Page 5) Proposed definition revisions in S5.C.2.2a - Ongoing mapping -
   a. S5.C.2.a.i - The requirement to map known MS4 outfalls and discharge points is not consistent with verbiage for Phase IIs.

   b. S5.C.2.a.iii - "Permanent" requires more definition. Will Permanent Stormwater Facilities be synonymous with the definition of Structural Stormwater Controls as currently defined in S5.C.6?

   c. S5.C.2.a.iii - Are all connections here the same as those referred to in subparagraphs vi and vii? If so, it should be placed with the other connections information. If not, the verbiage should be revised, as "connections" is a defined term.

   d. S5.C.2.a.iv - Does the mapping and delineation of MS4 Geographic areas which do not discharge to surface waters include those areas that outfall or discharge to UIC wells? It is unclear whether this new requirement clearly reconciles with the statement: "Wells regulated through the UIC program are not required to be mapped under the Municipal Stormwater Permit, as the UIC program rules apply. However, it may be useful to include UICs on your map".

   e. S5.C.2.a.iv - Is this new requirement a further manifestation of the language: "To avoid duplication, municipalities that are under an NPDES stormwater permit may choose to meet UIC program requirements by applying their Stormwater Management Program to areas served by UIC wells"? This is a confusing statement, please explain further what is meant by "…may choose to meet UIC program requirements by applying their Stormwater Management Program to areas served by UIC wells".

f. S5.C.2.a.vi and .vii– If all connections (private and public) need to be mapped, we recommend combining these requirements into one subsection.

5. New Mapping in S5.C.2.b
    a. S5.C.2.2.b.ii - Does this only apply to urban and higher density areas described in S5.C2.a.v?

    b. S5.C.2.c – It would be preferable to include Mapping Standards in the Permit, not on a website that can be changed or edited over the 5 year duration. A website address should be included here.

    c. It is unclear whether there is a proposal for mandatory re-mapping of Permanent stormwater facilities owned and operated by the Permittee? Will completing this new additional MS4 mapping attribute be required for the 3.5 year 2019 Permit cycle? Does this proposed definition expand the previous definition to include new additional structural stormwater facilities remapping work?

6. Draft Mapping Guidance
    a. (page 2) – For "Permittees must maintain an on-going mapping program…. To update their MS4 maps by a certain date…" please provide a footnote for the date, this is critical information to the Permittee?

    b. (page 6) – Regarding the requirement to "map MS4 at locations where discharges leave the MS4 and enters a private stormwater systems…." This is a connection point, not an outfall. An outfall, according to the current Permit's definition is a point where a stormwater discharge enters a surface receiving water or waterbody. As a Permittee, the County is not directly responsible for, and has very limited influence on what happens to the rest of the stormwater system outside the County's MS4. It does not make practical sense to map outfalls where private-public connections between systems occur. Outfalls should only be mapped based strictly on the current Permit's definition.

    c. (page 9) – Regarding the language, "Knowing where stormwater discharges leave or enter your MS4 system…" – We appreciate hearing the reasoning behind what is being asked for; this helps the County do a better job of mapping its MS4. Please provide this explanatory context and reasoning for the rest of the mapping requirements and definitions, it is very useful. The County can meet a Permit requirement milestone more fully if we understand the overall programmatic goal and its practical utility to improving the SWMP. (…it's much better that just being given a directive). If the County could work more effectively with the State to create and articulate the goals and the vision for the future NPDES Permits, we could do a better job at creating the data and programs necessary to support those goals.

    d. (page 13) - City 'B' should map both the connection to City 'A' and to private connections. The private should not be an outfall especially since Ecology is requiring

the Permittee to label size and material type. That information is unknown as the pipe, channel or other device are not owned or operated by the jurisdiction. Also, there is a reference to in the text to a UIC although there is not a UIC illustrated in the diagram.

e. (Figure 4 on pg. 13; and figure 7 on pg. 15) We disagree with the directive statement, "City B would map the location where the drainage ditch (part of the MS4) discharges to the private storm system as an outfall, and this is because City B knows that the MS4 discharges to a surface receiving water after it leaves its system." This scenario represents a public to private stormwater conveyance connection and not by any legal definition is it an outfall discharging stormwater into a receiving water. There is a privately owned outfall discharging into a receiving water at the end of the system but any publically owned stormwater conveyed through a connection does not represent a point source structure discharging into a receiving water. You can't determine outfall responsibilities by constructing some abstract definition designed to apply a construed "how many degrees of separation" criteria. How can the State assign the jurisdiction as being legally responsible for a point source outfall when there is literally no physically located outfall discharging into a receiving water from the County's MS4? This is regulatory semantics and it attempts to stretch the literal outfall definition into some uncertain version of a figurative outfall definition. This legal distortion creates additional layers of Permittee responsibilities where there is no legal authority or MS4 ownership.

f. (Page 16) – Regarding Figure 8, how in this scenario can you prove or require the jurisdiction has actionable knowledge there is an outfall discharging from the private system into a receiving water? This scenario should be designated as a connection point to a privately owned facility, the County is not responsible for private outfalls unless they are determined to be illicit and that knowledge would only be available if the jurisdiction collects that kind of specific information through its IDDE field screening efforts or private BMP inspection program.

g. (Figure 9) - The mapping MS4 outfall locations is incorrect. The natural "bed and bank" stream channel (representing the Receiving Waters) are conveyed into a culvert and then directly into a short segment of a man-made conveyance ditch. Once the Receiving Waters are diverted to that ditch it does not lose its legal standing as a Water of the US (and by default waters of the State and therefore NPDES designated receiving waters). Any maintenance and operations activity applied to this man-made roadside ditch segment should not be conducted as if it is just a MS4 open conveyance ditch but as a Waters of the US (and by default waters of the State and therefore NPDES designated receiving waters) because unlike stormwater conveyances, this segment would be flowing outside of those times of rainfall runoff. The MS4 outfalls distinctly occur where the two stormwater only pipes discharge into the Receiving Waters, because the natural stream has now been pirated (or diverted) into what apparently would be seen as part of the County's MS4, but in fact, the legal reality would still be it is Waters of the US (and by default waters of the State and therefore NPDES designated receiving waters). There is extensive case law regarding the jurisdictional determination that this man-modified channel conveyance scenario connecting two natural "bed and bank" stream

channel segments would still be wholly interpreted as the Water of the US (and by default waters of the State and therefore NPDES designated receiving waters). The outfall at the end of the man-made conveyance segment is misplaced.

h. (Page 18) – This illustrated scenario is correct in its appropriate placement of outfalls. So, why does this figure 10 scenario differ from the figure 9 scenario? In figure 9, the ditched man-made stream segment is considered part of the MS4 until it flows into the natural "bed and bank" stream channel again. In figure 10, the ditched man-made stream segment remains receiving waters, which is correct. These two illustrations are inconsistent with each other.

Special Condition S5.C.4 – Controlling Runoff – site and subdivision scale and Stormwater Management Manual for Western Washington (SWMMWW) – Preliminary Draft Package

1. We like the approach to reorganizing the SWMMWW to make it more readable and user-friendly. Thank you for keeping the BMP numbering system the same for continuity;

2. Ecology gives permittees three options for upgrading to the proposed 2019 SWMMWW: Adopt the 2019 SWMMWW, use the 2012/2014 SWMMWW but amend it with "substantive corrections as identified in the 2019 SWMMWW", or amend our (Pierce County's) 2015 manual with "substantive corrections as identified in the 2019 SWMMWW".

   We propose a fourth option that allows a jurisdiction to adopt the 2019 SWMMWW along with an addendum/special provisions section for "local jurisdiction corrections or special provisions." Currently a lot of the phase 1's have spent an enormous amount of time and money rewriting equivalent SWMMWWs to include their special provisions and make it more readable/useable. As Ecology creates a more readable and user friendly manual, it makes sense to keep it as a stand-alone "base" document, plus create a jurisdiction-specific addendum/provisions containing Permit-required revisions. Revisions each permit cycle would become easier, and would only entail revising the local jurisdiction's special provisions. This could potentially save jurisdictions a lot of time, resources and money. To address Ecology's concerns that jurisdictions may relax requirements with their special provisions, they could include special provisions in the SWMMWW to prevent backsliding or changing base requirements, as well as language giving the SWMMWW precedence where contradictions occur.

3. Regarding the 2014 Stormwater Management Manual for Western Washington, Volume 1 – Chapter 2 – Section 1-2.5.5 Minimum Requirement #5: On-site Stormwater Management – Lists #1 and #2 - Under "Other Hard Surfaces" - In rural Pierce County, we frequently have single-family house proposals on large lots requiring long driveways. These driveways are not largely pollutant-generating, and sheet flow dispersion would be adequate and cost-effective. Single family residences are being unduly burdened with large costs of implementing permeable

pavements or rain gardens for their driveways. These costs seem excessively disproportionate to the impact which is a lot of cases is hard to argue that there is any impact. The County supports retaining stormwater on-site, however, we believe that application of the rules as they currently stand are overly burdensome in rural areas and particularly on larger lots in rural areas. Pierce County would like Ecology to consider creating a separate set of criteria allowing an alternative hierarchy of other BMP types for these situations. These criteria would include:

- More frequent allowance of sheet flow dispersion, and
- More frequent allowance of splash blocks for downspouts, and
- Possibly requiring only vehicle parking areas in front of garages to be permeable pavement and,
- The allowance of porous gravel driveways as an allowed BMP.

4. We would like Ecology to consider allowing the County to only apply the SWMMWW in areas that meet the definition of an MS4 and or that are in a drainage basin that that flows to an MS4. Pierce County has a number of enclosed drainage basins that only drain into themselves. While we still need storm drainage controls within these basins to prevent flooding and other drainage impacts, we do not need the level of regulation in them that the SWMMWW requires.

5. We would like Ecology to improve the readability of prescriptive lists #1 and # 2. For instance in lists #1 and #2 under "Other Hard Surfaces" there is a superscript on the permeable pavement BMP that points the reader to the following "This is not a requirement to pave these surfaces. Where pavement is proposed, it must be permeable to the extent feasible unless full dispersion is employed. " We would prefer that this superscript note be removed as it causes confusion. Pierce County also attempted to prepare a flow chart for these lists (figure 2.3 in Volume 1 of the Pierce County SWMM). This flow chart helps but does not completely solve some of the confusion.

6. List 2 identifies that for "Other Hard Surfaces" that Permeable pavement is the 2nd choice and Bioretention is the 3rd choice. Please explain why Bioretention couldn't be moved up as a 2nd choice options as it is in List 1. We request that Ecology consider moving Bioretention up as an equivalent option to Permeable pavement.

Special Condition S5.C.6 Structural Stormwater Control and Appendix 11

We agree with the objective of this proposed Permit condition: to develop a new, systematic way of accounting for, and prioritizing structural stormwater control (SSC) projects within a Permittee's jurisdiction. The proposed approach employs a "level of effort" point attainment method in hopes to focus and optimize flow control and pollutant reductions in a cost-effective manner. Unfortunately, the point attainment approach will drive a program to emphasize and pursue only those project types or maintenance activities which generate points in the least expensive way. As a result, it may be forced to focus its limited capital investments in less developed areas where the land is cheapest and most available, yet not the most pollutant-generating per acre. It fails to capture and incentivize the right project-scale structural stormwater controls, by targeting the right pollutant in the most hydraulically erosive and pollutant-generating catchments most connected to the jurisdiction's receiving waters.

Our objections to this approach include:

- The chosen currency (acres treated) does not reflect effort
- It does not optimize resources/projects in terms of cost effectiveness
- It results in prioritization of projects by acres treated, but not by pollutant removal
- It does not prevent, and may in fact encourage, backsliding by diverting project prioritization toward point-generating projects instead of those that optimize pollutant removal.
- It distracts from focus on threatened and impaired receiving waters
- It detracts from good engineering. It becomes a BMP accretion game whereby the only goal is increasing the computed area where MS4 circuit stormwater is run through a flow control device (MR7) or endpoint treatment (MR5) regardless of where it's implemented.
- The limited SSC project type eligibility criteria being proposed, combined with a point awarding approach, begs to be gamed by jurisdictions with inadequate program capacity. A Permittee will be forced to advocate only projects or maintenance actions that generate point accomplishment as a reactionary means to demonstrate permit compliance and avoid G20 liability.
- The process is not reflective of how a Permittee's structural investments (appendix 11 reportable projects) provide increasingly focused and demonstrable improvements to the receiving waters.
- It won't translate well to public rate payers, political leaders and agency executives when trying to explain the relationship between the money being spent (budget appropriations) and the more certain achievement of water quality compliance.

We recommend rejecting the proposed approach, and instead would like to articulate the type of SWMP (or SSC program) Pierce County really wants to build and operate. Our basic premise is that quantitative pollutant removal is a better performance based metric than acres treated. We propose a performance-oriented permit program with the following characteristics:

- Establishes clear discernable Clean Water Goals (sound diagnostics related to the applicable water quality standards and designated beneficial uses for each discrete water body)
- Defined by numeric pollutant load reduction objectives – and a pollutant reduction crediting system
- A load quantification tool is provided (BMP or SSC project scale and catchment scale pollutant load calculator)
- Regular structural BMP conditions reporting is conducted. Focused annual inspections confirm the engineered functionality of structural BMP facilities to confirm their operational effectiveness and corresponding pollutant load reduction performance.
- A structured Adaptive Implementation Process generates iterative Records of Decision moving forward so that the SWMP can track its development, evolve, and adjust with certainty.

Step by step implementation involves the following. Note that this work dovetails with the long term municipal stormwater planning Ecology is current proposing in S5.C of the Permit, and any local monitoring we are advocating for under S8:

- Set clear clean water targets (what are we chasing?);

- Delineate MS4 catchments; organize catchments into planning compartments having similar land use/transportation networks;
- Prioritize catchments/catchment groups with direct connectivity to receiving waters;
- For each catchment/catchment group, target load reduction through SSC, CIP, and load calculations. Load reduction is the common currency (not acreage equivalency);
- Create a system that measures the right pollutant(s), in the most hydraulically erosive and pollutant-generating catchments, and those catchments are the most connected to the jurisdiction's receiving waters.

This strategy is better than the proposed strategy because it:

- Makes pollutant removal the overarching priority;
- Measures progress in a quantifiable way;
- Prevents backsliding (intentional or unintentional);
- Rewards projects that have genuine environmental benefits, and results in increasingly focused and demonstrable improvements to the receiving waters;
- Demonstrates return on structural investments;
- Better environmental return on investments for structural stormwater BMPs pollutant reduction or treatment performance;
- Regulator and permittee achieve mutual alignment of the program goals and pollutant targets;
- Reduces compliance uncertainty for both Regulator and permittee
- Produces trackable and reportable results which cost appreciably less than they would without a performance-driven approach
- More resilient to 3rd party lawsuits
- Regulatory and programmatic focus are aligned on clear, uncontested, mutually agreed upon clean water targets;
- NPDES permit achieves greater streamlining with each successive 5 year cycle;
- Mutual assurance achieved between Regulator and permittee regarding long-term asset management and ongoing pollutant load reduction performance;
- Utilization of valuable local diagnostic and planning work.
- This allows each individual Permittee to create a well-directed, functional program with properly engineered solutions and programmatics to address it. The Ecology Permit Manager and Permittee can coordinate to rationally tune the program over time as they implement their directed projects and actions, thus streamlining unnecessary elements and maintaining the program's value and relevance into the future.
- If we can also work (Permit Manager and Permittee) to shed the complexity of competing standards and monitoring requirements, then we can potentially accelerate water quality improvement through a more focused performance-based approach to organizing and implementing the SWMP.

If Ecology's draft approach is implemented, we encourage it to be a placeholder over the upcoming permit cycle while the approach described above is developed. If certain critical changes are incorporated the drafted approach may not be as fatally flawed as it currently appears.

We have the following recommendations for improving the draft *Fact Sheet Language and Guidance for Special Condition S5.C.6 and Appendix 11 as proposed for preliminary review and comment October 24, 2017***.**

1. In almost every case, the randomized approach for establishing a jurisdiction's individual project area consistently generated acres significantly higher than the actual project areas. We recommend getting feedback from individual jurisdictions on actual project areas and adjusting estimates accordingly.

2. The level of effort threshold (the 1,300 incentive points target) should be lowered to be more manageable, and this first permit cycle should be viewed as experimental. Pierce County, when running this corroborating analysis exercise, was able to generate only 575 points from the full assemblage of qualifying SSC projects it implemented over the current Permit cycle (i.e. since August 2013). The County had a difficult time generating the retrospective curb mile analysis necessary to determine the above baseline eligibility (treatment pass > once per year per road segment) for sweeping program points. However our estimate for this portion was less than 140 points. This indicates the County's current combined SSC program level of effort of 715 points is significantly less that the projected 1,300 points proposed by Ecology. If the 1,300 point threshold is adopted into the Permit it would require an unreasonable jump in funding and capacity than the County applied throughout the current Permit.

3. Ecology must clarify whether the next Permit cycle will be only 3.5 years in order to compensate for the extension of the 2013 Permit delay. Any level of effort threshold (i.e. Appendix 11 point accumulation reporting goal), if adopted, must be appropriately adjusted downward to accommodate for the shortened 2019 Permit cycle.

4. The 60 percent plan set development threshold and project point scoring eligibility (or "ramp up" adjustment) being proposed to acknowledge the work associated with project planning, is a point of disagreement. There are many circumstances whereby even a 90 percent design plan set will not reflect an imminent or reliable commitment to project construction. There are six projects on Ecology's list of grant supported projects in their analysis which will never go to construction or are ineligible due to project type (instream project types). The County's position is that any and all stages of planning should not be counted as representing the level of effort associated with Appendix 11 project reporting (i.e. accounting for a Permittee's actual "in-the-ground and operationally on-line WQ retrofit projects for existing developed areas). The 60 percent plan set development project eligibility threshold unduly promotes planning to count for structural stormwater controls, without the certainty of construction actually being funded. Only retrofit projects which are completed and functionally on-line should be counted as structural stormwater controls reducing impacts to watershed hydrology and pollutant discharges from MS4s.

5. (Page 2) - Qualifying Projects - We disagree with the inclusion of *Projects not directly related to stormwater (i.e. not driven by stormwater capital planning) but providing stormwater benefits.*

This includes forest protection (i.e., acquisition), forest conservation easements, forest cover restoration and riparian buffer restoration.

The County doesn't argue the real and tangible value of undeveloped parcel preservation, particularly undeveloped and restored forested landscapes and intact riparian corridors (buffers) located in Urban Growth Areas, but these are nonpoint source control measures and not structural stormwater control projects located within the County's MS4 circuit infrastructure. Per Ecology and according to the definitions and acronyms section of the Phase I Permit: "A circuit means a portion of a MS4 discharging to a single point or serving a discrete area determined by traffic volumes, land use, topography, or the configuration of the MS4." Circuits may vary in size and maintenance needs. The simplest type of circuit is a set of connected facilities that drain to a single point." So, with this distinction of a MS4 circuit being constrained to the publically owned infrastructure which collects, conveys and treats stormwater, the County disagrees with these Project Types as being eligible and qualifying under S5.C.6 because they are physically located outside or above the Permittee's MS4 circuit infrastructure.

6. (Page 2) - Qualifying Projects - Regarding *Regional facilities…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…* This needs further clarification as to how partial credit eligibility is determined and calculated; and why Transportation projects with stormwater treatment upgrades wouldn't be fully disqualified because they are exclusively covered under S5.C.5. This is extremely important to the County because new flow control facilities (S.5.C6.a.i) designed to control stormwater flow from existing development could result in points being generated from at least some of the almost 19 Transportation projects the County is planning to construct before 2019, projects where new stormwater treatment is being installed where it wasn't present before.

7. (Page 4) Property Acquisition Projects - We agree this project action is beneficial for increasing runoff control when employed throughout an UGA catchment in aggregate, but it is not a structural stormwater control physically located in the Permittee's MS4 circuit infrastructure. It is distinctly located outside the MS4 unless it provides a valuable site for an endpoint SSC installation.

8. (Pages 4 & 5) Restoration of Riparian Buffer& Restoration of Forest Cover - These two types of Projects are located outside the MS4 circuit infrastructure and beyond the traditional limits of the NPDES Permit (below end-of-pipe outfalls). The County believes it is a stretch to identify either of these actions as a structural stormwater control. The County supports the idea that these kinds of projects should qualify for Appendix 11 reporting, but because the projects are located beyond the limits of the NPDES Permit, they must not be required as a future condition of compliance with Special Condition S5.C.6.

9. (Pages 4 & 5) Floodplain Reconnection Projects - Qualifying floodplain reconnection projects (and Restoration of Riparian Buffer Projects) will have an MS4 nexus and provide flow reduction and runoff treatment benefits. Again, the County would be supportive of these types of actions being eligible as qualifying for Appendix 11 reporting, but these project types must not be required in the future as a condition of compliance with Special Condition S5.C.6.

   The County disagrees that instream flow reduction qualifies as being within the traditional limits of the NPDES Permit. However, channel hydromodification (excessive incision) which results from geomorphically significant flows (increased hydraulic erosivity) which are generated by excessive stormwater runoff originating from a Permittee's urbanized catchments and the MS4 that serves them do result in a number of deleterious conditions. These conditions include: loss of hyporheic connection, loss of overbanking connection to the floodplain, loss of sediment sequestration, loss of instream salmonid habitat, and lower benthic macroinvertebrate scores (B-IBI). All of these conditions threaten aquatic life uses and those water quality standards assigned to protect those uses. For that reason the County agrees a proper nexus to instream project work does exist under the goals of Clean Water Act Section 402, the County's Phase I NPDES Permit and more specifically, Special Condition S5.C.6 of the SWMP. The apparent goals of hydrologic flow control standards (MR 5 and 7) are specifically to reduce geomorphically significant flows and the hydromodification of the receiving water. This SSC relationship and purpose also establishes an implied nexus to the receiving water because that lack of flow control most often results in the hydrologic alteration and channel geometry modification that degrades the protection of instream uses. Instream uses will not be fully protected or restored by limiting the qualifying capital project work to structural flow control corrections (retrofits) in the upland.

10. (Pages 4 & 5) Maintenance with capital construction costs - Maintenance with capital construction costs ≥ $25,000, and Other actions to address stormwater runoff into or from the MS4 not otherwise required in S5.C - Ecology uses the term "enhanced maintenance projects" to include *high efficiency* street sweeping and MS4 circuit infrastructure line cleaning not otherwise used to comply with S5.C.9 (i.e. catch basin inspection alternatives). However, line/channel cleaning always includes CB cleaning within the pipe or ditch line section of the circuit being maintained, and that acknowledgment needs to be articulated and specifically qualified in the upcoming Permit language. The County agrees, project type eligibility should be extended to source control program work such as street sweeping (a mobile type of structural stormwater control), however it should be reserved for modern regenerative air vacuum street sweepers or high efficiency machines only and not extended to mechanical broom sweepers which are incapable (highly inefficient) at recovering road deposited particulate material within the range of the Basic Treatment Menu's stormwater TSS performance goals standards. (.45 um to 500 um).

    Additionally, eligible curb mile sweeping work above and beyond the minimal baseline program requirement of one treatment pass per road segment per year seems very arbitrary and is unsupportable. Sweeping programs are fully elective program actions and are most often organized around the intensity of surrounding land uses (e.g. commercial / industrial land use

catchments) and by AADT (meaning the most active arterial and multilane roads). Sweeping programs are also informed by the known (monitored) buildup of road deposited material and the scheduled frequency of treatment passes required to optimize a maximum material recovery (i.e. how many times a year a sweeping is warranted to be repeated based on recurring and predictable buildup of road deposited material). Any sweeping credited under S5.C.6 should be eligible for Appendix 11 reporting because there is no base line SWMP requirement for this type of action in the Permit.

11. Regarding SSC project type eligibility and the question of project area location outside the limits of the MS4 Permit - Under S5.C.6, is there an allowable nexus to project work done in the receiving waters to appropriately address the deleterious effects of stormwater runoff generated by the MS4? Response: A crosswalk method for a comparative performance based metric or credit relating the stormwater treatment benefits of an instream sediment reduction project to an upland MS4 structural stormwater BMP project designed to meet the Basic Treatment Menu (BTM) requirements. The Minimum Requirement 7 and the BTM provide a baseline for evaluating whether a structural stormwater BMP performs well enough to achieve the desired "reduction in the volume of untreated stormwater".

    SSC facilities which are designed consistent with the BTM are used to meet a TMDL stormwater volume reduction or treatment allocation requirements. Stormwater which is treated by such a SSC facility is accounted the same as if the stormwater had been removed from the MS4 system. Designs that are not in the BTM but can be demonstrated to achieve comparable levels of stormwater removal (or treatment) would also receive full credit (but not more than a 1:1 match). Minimum Requirement 7 is intended to address geomorphically significant flows through enhanced flow control measures - which should provide an incentive for projects that provide retention or removal of flow in areas upstream of geomorphically sensitive reaches (to protect aquatic life uses in the receiving waters).

    Stream channel improvement projects may not achieve the full performance targets of the BTM but should receive some credit toward meeting the volume reduction or treatment goals. The accounting can be done on the basis of TSS removal. For example, an instream channel repair project is specifically designed to achieve a 20 percent reduction of suspended solids based on an instream stormflow of say 100 MG (converted from a known hydro-modifying or geomorphically significant flow ordinately expressed as cfs via a flow magnitude frequency analysis). The credit toward “the reduction of volume of untreated stormwater” could effectively be calculated by comparing the project’s design removal rate of 20 percent to the BTM target removal rate of 80 percent. The project would then be equivalently credited as meeting 100 MG x (20% / 80%) = 25 MG of treated stormwater.

    This demonstration allows the comparison and crediting of all types of SSC and capital BMP improvements that contribute to the overall pollutant load reduction and water quality improvement goals of that jurisdiction (Permittee). This type of approach provides program flexibility and a common performance metric for cost to benefit analysis comparisons between different project designs and types and their relative effect on achieving clean water targets.

Special Condition S5.C.8 - IDDE

1. (Page 1) Recordkeeping – Pierce County is opposed to the requirement to track "potential" illicit discharges for a number of reasons. Having to now qualify illicit discharges as "potential" significantly raises the level of ambiguity and uncertainty. By increasing the guesswork as to what constitutes "potential", the validity, certainty, and potential liability to conduct of IDDE investigations, notification, and recordkeeping (permit compliance performance measures) are thrown into question. In theory, the opportunity to identify and correct "potential illicit discharges" occurs in part through the County's NPDES Municipal Phase 1 permit source control program per S5.C.7. This program has mechanisms for the inspection of pollutant generating sources (commercial and industrial properties), and applies necessary operational and structural source control best management practices to correct conditions where the potential for illicit discharges exist.

2. Additionally, this would set up a situation whereby past IDDE data (which would have been based on the concept of "regular" illicit discharges), may not be equivalent to the new, more broad standard for "potential" illicit discharges. Do not change the definition mid-stream; keep it apples to apples to maintain the credibility of past IDDE data.

3. Ecology must be explicit about the purpose of this proposed language. What is the motivation? How will it benefit Ecology, or Permittees on a regional basis?

4. (Page 3) Revised Annual Report Q20/48 - Pierce County is opposed to any changes to the current reporting requirements for IDDE tracking and reporting. The County has tracked and subsequently analyzed a comprehensive set of historical IDDE data, and we intend to continue this effort in order to inform our stormwater management program. However, we reserve the right to conduct our in-house effort on a voluntary basis, and complete it as staffing and resources allow. Requiring an extensive permit-required recordkeeping, tracking, and reporting effort—submitted with the Annual Report—would be an unnecessary time-sensitive burden, and would put a strain on other more critical permit compliance operations.

Special Condition S5.C.10/S5.C.1 – Education and Outreach

1. (Page 5) - Education and Outreach Program – *Permittees may meet these requirements….Each Permittee **shall** implement what is developed regionally…* - Pierce County recommends replacing *shall* with *may.* This option may not be feasible for all Permittees.

2. (Page 6) - S5.C.10.b.II – Behavior Change – The list of targeted audiences creates a lot of confusion for education and outreach professionals. We recommend:

a. Industries that are not necessarily similar or have similar issues are mingled together. We recommend separating them out further.
b. This list should separate individuals from businesses. These groups are different and need different strategies to reach them.
c. The target audiences listed should be examples and not an exhaustive list or limited to those groups.
d. Children are also listed and they should be in another category.

3. (Page 6) S5.C.10.c – Nine months is too short a time period at which to conduct an effectiveness evaluation. Also, we are concerned that some jurisdictions may not have the budget to conduct a new evaluation.

Special Condition S8 – Monitoring

Pierce County has a number of concerns about the proposed S8 language. Permittees have consistently expressed concern about the Stormwater Action Monitoring (SAM, previously RSMP) program's regional nature, and the difficulty applying results to local stormwater management actions. The probabilistic approach to SAM's study is a useful tool to monitor the general health of Puget Sound, but it does not help Permittees tease out whether their stormwater management actions are protecting or improving waters within their jurisdiction. A limitation of the probabilistic status & trends approach is that it only informs whether trends are getting better or worse (and where). It falls short of providing insight into "the why" those trends are emerging. The "why" is critical to help inform the adaptive management feedback loop valued by our stormwater management programs (and ratepayers who want to understand the value of their stormwater fee investments). Overall, SAM only partly serves the overarching purpose stated in Section 3.2 of the Stormwater Work Group's 2010 *Stormwater Monitoring and Assessment Strategy for the Puget Sound Region*, which is to *develop and carry out a strategy that improves how we manage stormwater and provides decision makers with critical information to help them make more informed, more successful decisions.*

The cost of the "pay in" option has financial impacts on local monitoring programs. The cost of paying into SAM threatens the viability of local monitoring to support other NPDES requirements and local water quality targeted programs. For example, sustained feasibility for local monitoring is critical if Ecology's proposed long term municipal stormwater planning (long-term MS4 planning) is implemented. Ecology's formal draft framework for long-term MS4 planning (page 4) instructs Permittees to "Give priority to receiving waters that show low to moderate levels of impairment (e.g., as assessed via water quality data, B-IBI scores, habitat surveys)." Permittees will need to maintain utility revenues to conduct this local scale monitoring, to apply to prioritize basins and perform diagnostic as well as status and trends monitoring.

The existing funding pool for effectiveness and source identification exceeds the project oversight capacity for projects considered of high value and utility. Offering an option to make those funds (or a portion of those funds) eligible to support local monitoring and data evaluation efforts would support the types of local benefits described above.

The proposed language restricts the type of monitoring Permittees can do (outfall monitoring) should they choose not to pay into SAM, but Ecology has not explained how the outfall data will be used to support SAM or other Ecology efforts. At first glance, outfall monitoring appears to only serve as a deterrent to "paying in."

We propose two revisions to the proposed language to address these concerns.

First, create a stand-alone alternative under Status & Trends or Effectiveness Studies, or as a revision to Effectiveness Studies Option #3, which combines payment into the SAM collective fund and allows the permittee to conduct an independent study that benefits them locally. Language could read:

a. Each Permittee choosing this option shall both pay xx% of the annual fee into the collective fund to implement regional status and trends monitoring, and spend the remaining yy% on an independent monitoring study that informs or supports the Permittee's individual stormwater management actions.

b. The purpose of the independent study should address one or more of the following: assist development of the jurisdiction's long term municipal stormwater (MS4) plan (S5), support structural stormwater control (S5.C.6) or source control program (S6) needs, prioritize stormwater pollution mitigation projects (Appendix 11), inform O & M planning and IDDE work (S6), inform stormwater-related TMDL compliance (S7), integrate mapping information for the purpose of monitoring design (S5.C.2, S5.C.3), support local status and trends monitoring (S8), support local diagnostic monitoring (S8), or support other projects that benefit stormwater management as approved by Ecology.

c. Independent studies that support Stormwater Work Group goals and research questions are highly encouraged but not required.

d. Payments into the collective fund are due to Ecology annually beginning [xx/xx/xxxx]. The payment amounts are [xx% of full pay-in amount].

e. No later than February 2, 2020, submit to Ecology, for review and approval, a detailed proposal describing: the purpose, objectives, design, and methods of the independent monitoring study; anticipated outcomes; expected benefits and/or modifications to the Permittee's stormwater monitoring program; and relevance to other Permittees.

f. Submit a draft QAPP to Ecology within 120 days of Ecology's approval of the detailed proposal. The QAPP shall be prepared in accordance with [QAPP template to be determined

by Ecology]. The QAPP shall include reporting details including timely uploading of all relevant data to Ecology's EIM database, and sharing findings with other permittees. If Ecology does not request changes within 120 days of submittal, the QAPP is considered approved.

g. Begin full implementation of the study no later than six months following Ecology's approval of the QAPP.

h. Describe interim or ongoing results, and status of the study implementation in annual reports throughout the duration of the study.

i. If the study has a defined end date, report results, including recommended future actions or study modifications, to Ecology and on the Permittee's webpage no later than six months of completion of the study.

Second, revise the language under the Effectiveness Studies section. Clearly articulate that the types of activities described under "b" above could qualify for funding under the effectiveness studies pooled funds provided they can demonstrate regional benefit. For this option, include language that results must be reported through SAM.

This approach has multiple benefits:

- It produces timely and robust data needed by Permittees to support and relate multiple sections of the municipal stormwater permit, and promotes an integrative approach to stormwater management.

- It helps mitigate local concerns that SAM fees are a significant financial threat to sustaining long-term, ambient monitoring programs used to identify and prevent impending water quality impairments.

- The permit can include the criteria that permittee's local efforts need to meet in order to be eligible (even possibly creating a point-weighted approach to determine the level of reward/credit eligibility).

- It is a potentially powerful tool to help Permittees select and prioritize structural stormwater controls;

- It enables jurisdictions to sustain and build internal capacity for collecting local, diagnostic scientific data, and for contracting to collect data under SAM studies.

- It could provide local, targeted data to supplement and fill gaps in SAM monitoring. For example, local projects could increase the density of SAM's monitoring network. If there needs to be a more refined approach by the Permittee's monitoring program to conduct its

data collection and analysis in order to make it more complimentary to the SAM regional approach, then those details could be duly identified and negotiated prior to the Permittee's monitoring of the next water year.

- It could enable local monitoring and evaluation efforts that function at a scale and resolution that can realize the benefit of integrating status & trends, source identification, and program effectiveness evaluations (Thurston County's work on the Henderson Bay TMDL is a good example).

- It partially addresses concerns some Permittees have expressed about paying into a pooled fund and having monitoring conducted by another entity inside their jurisdictional boundaries.

The following comments concern specific portions of the preliminary draft language:

1. (Page 1) S8.B – This section should continue to be labelled Status and Trends Monitoring consistent with the 2013 municipal stormwater permit, and include local as well as regional monitoring.

2. (Page 1) S8.B.1 – Clarify that this addresses a one-time (2019) payment only.

3. (Page 3) S8.B.2.a – Make explicit that Permittees who have programmatic capacity and pay into the Puget Sound regional status and trends monitoring program shall be assured of first rights to a SAM contract to conduct the monitoring within their jurisdictional boundaries. Permittees who elected self-monitoring under the 2013 Permit invested and developed capacity to implement it. That investment and capacity should not be undermined or disqualified by future Permit options.

4. (Page 2) S8.B.2.a - Regarding the note to reviewers, Pierce County strongly disagrees with the statement that *the data produced by permittees who conducted individual monitoring [under the 2013 Permit] did not produce the data Ecology hoped would meaningfully contribute to the regional program, and threatened its integrity*.

   Entities who conducted individual monitoring basically paralleled the SAM studies, but stayed within the boundaries of their jurisdiction. They conducted the same studies using similar QAPPs prepared by the same authors as SAM, in the case of mussel monitoring followed a joint QAPP as SAM, trained side-by-side with SAM-contracted entities to implement consistent monitoring protocols, and sampled sites from a list produced by SAM. Our data have undergone acceptable and rigorous quality assurance procedures and quality control evaluations, have been accepted into Ecology's Environmental Information Management System database, and have been included in SAM analyses and findings. This is a very meaningful contribution to the regional status and trends monitoring program. Any threats to the integrity of regional program were the result of decisions made by Ecology.

Individual monitoring entities financed supplemental studies in addition to those conducted by SAM, which addressed Stormwater Work Group questions. These included freshwater sediment analyses for contaminants of emerging concern (hormones, steroids, pharmaceuticals and personal care products), and marine bacteria monitoring. These data can be used by the Stormwater Work Group, SAM, and Ecology to refine study questions under the next permit. This enhanced the integrity of these existing programs at no cost to SAM.

We suspect the motive for minimizing the value of the individual monitoring is to maximize financial support for the SAM status and trends program while discouraging permittees from conducting individual monitoring in subsequent permits. We acknowledge the value of the SAM program and are proposing an alternative that will sustain SAM funding, inform regional monitoring efforts, and provide more relevant data to individual permittees.

5. (Page 3) S8.B.2.b & (Page 6) S8.C.3.b – Consider eliminating the stormwater discharge monitoring alternative. Ecology has not demonstrated a purpose for this monitoring, how the data will be used to discern environmental status and trends or stormwater management program effectiveness, or how the data can help Ecology or Permittees pursue legitimate clean water targets. The proposed alternatives should meet these basic criteria and fundamentally, be a purposeful use of public resources rather than costly busy-work.

6. (Page 8) S8.C – Note to reviewers - We agree with the concept of rolling SIDAR-related studies and associated funding into the effectiveness study requirements section.

7. (Page 5) S8.C.1 – It should not be mandatory that each permittee submit records of SWMP activities for SAM-related studies. This is an undue burden on Permittees. If record-sharing becomes mandatory, permittees should be reimbursed from the associated SAM project for materials and labor.

8. (Proposed new Appendix XX – fees)- Pierce County acknowledges the benefits of SAM's regional status and trends study, and thinks all Permittees should contribute some amount to this effort. Ecology should consider a reduced fee for Permittees conducted their own local monitoring. Ecology's proposed increases to the status and trends fund should be retained, provided the effectiveness studies per capita cost allocation be reduced by approximately the amount of overall increase for the status and trends per capita cost allocation. Overall SAM permit-cycle costs in the next permit cycle should not exceed overall costs for this permit cycle.

Long-term municipal stormwater planning

Comments on this section will be sent separately.

Special Condition S5.C.X Source Control (Phase II)

Pierce County supports Ecology bringing Phase II permits into alignment with Phase I permit requirement, therefore we support adding a source control requirement to the Phase II permit conditions. We believe that consistency between permits will encourage coordination and cooperation to address surface water impacts Countywide. Cities contain a large portion of pollutant generating businesses. With implementation of this requirement Cities will have a process and program in place to address sources that can impact the County's MS4. The Pierce County inspection program has located and eliminated significant sources of stormwater pollution through our source control inspections. We believe Phase II's will find this program to be a valuable way to identify sources of pollutants to their MS4s.