

## **2019 Western Washington Municipal Stormwater Permit Reissuance**

In October 2016, stakeholders provided early input to identify areas of the permits that need clarification or improvement. While the early input is informal and responses won't be prepared, we are reviewing input closely and greatly appreciate the time and energy involved in providing it.

These early efforts demonstrate a shared commitment to protect and restore Washington's waters.

Below is the informal early input received on permit reissuance:

[\*Ad-hoc group\*](#)

[\*EPA\*](#)

[\*WEC; Futurewise; Puget Soundkeepers\*](#)

[\*Thurston County\*](#)

[\*King County 1\*](#)

[\*King County 2\*](#)

[\*Seattle\*](#)

[\*Craig Doberstein\*](#)

[\*Pierce County\*](#)

[\*King County 3\*](#)

[\*Kitsap County\*](#)

[\*Stormwater Work Group\*](#)

[\*EPA to SWG\*](#)

**Please send feedback to:**

**Mieke Hoppin – City of Tacoma [mhoppin@ci.tacoma.wa.us](mailto:mhoppin@ci.tacoma.wa.us)**

**2018 NPDES Municipal Permit Ad Hoc Group Meeting – Appendix 7: Determining Construction Site Sediment Damage Potential**

**Problem Statement**

Is this Appendix useful?

**Meeting Notes**

Meeting Date: July 6, 2016: 2:00-2:30.

Attendance:

- Mieke Hoppin – City of Tacoma
  - Elsa Pond - WSDOT
  - Marilyn Guthrie – Bainbridge Island
  - Bill Leif – Snohomish County
- 
- Those in attendance do not use this appendix in their jurisdiction and instead inspect every applicable site as required by Permit.
  
  - Appendix could be simplified for those jurisdictions that wish to use it.

**Please send feedback to:**

**Mieke Hoppin – City of Tacoma [mhoppin@ci.tacoma.wa.us](mailto:mhoppin@ci.tacoma.wa.us)**

**2018 NPDES Municipal Permit Ad Hoc Group Meeting – Definitions and Acronyms**

**Problem Statement:**

Lack of definitions in Permit can lead to inconsistent implementation amongst jurisdictions.

**Ad Hoc Committee Meeting Notes:**

Meeting Date: July 6, 2016: 1:00-2:00.

**Attendance:**

- Mieke Hoppin – City of Tacoma
  - Jana Ratcliff - WSDOT
  - Anne Dettelbach - Kirkland
  - Todd Hunsdorf – King County
  - Elsa Pond - WSDOT
  - Marilyn Guthrie – Bainbridge Island
  - Bill Lief – Snohomish County
- 
- General consensus that there is a lack of definitions in the Permits and SWMM and this lack of definitions can lead to inconsistencies amongst jurisdictions. But, it is also important to leave language open for interpretation amongst jurisdictions to allow for implementation.
  - Q. Does Ecology have thresholds for when definitions should be included in the Permit? How do they decide what gets defined and what does not?
  - When creating definitions, it is important to prioritize those words that are currently creating implementation challenges before others.
  - Some words/terms would be better served by guidance documents or FAQs instead of definitions being added to Permit.
  - When creating or revising definitions look at settlement agreement language from last permit for background.
  - The Ad Hoc Group will create an excel spreadsheet to track those words/phrases that are undefined or open to interpretation and suggest definitions or edits.

**Product**

- The Ad Hoc Group created an excel spreadsheet which is located here: [https://kc1-my.sharepoint.com/personal/todd\\_hunsdorfer\\_kingcounty\\_gov/\\_layouts/15/guestaccess.aspx?guestaccesstoken=DikOMWF4n%2b%2fykIRw2GAw1UbrVKtkWBSMSnWuhB%2f1U1c%3d&docid=16df962dc98e849ce92c6c4e975ccb428](https://kc1-my.sharepoint.com/personal/todd_hunsdorfer_kingcounty_gov/_layouts/15/guestaccess.aspx?guestaccesstoken=DikOMWF4n%2b%2fykIRw2GAw1UbrVKtkWBSMSnWuhB%2f1U1c%3d&docid=16df962dc98e849ce92c6c4e975ccb428).
- The excel spreadsheet has three categories including those words/phrases without definition (no definition tab), those words/phrases where the definitions are lacking (definitions lacking tab), and those phrases within the permit that are lacking definition or guidance.
- In the spreadsheet suggested definitions or language was included sometimes as well as level of importance (does this warrant a change to permit or not).

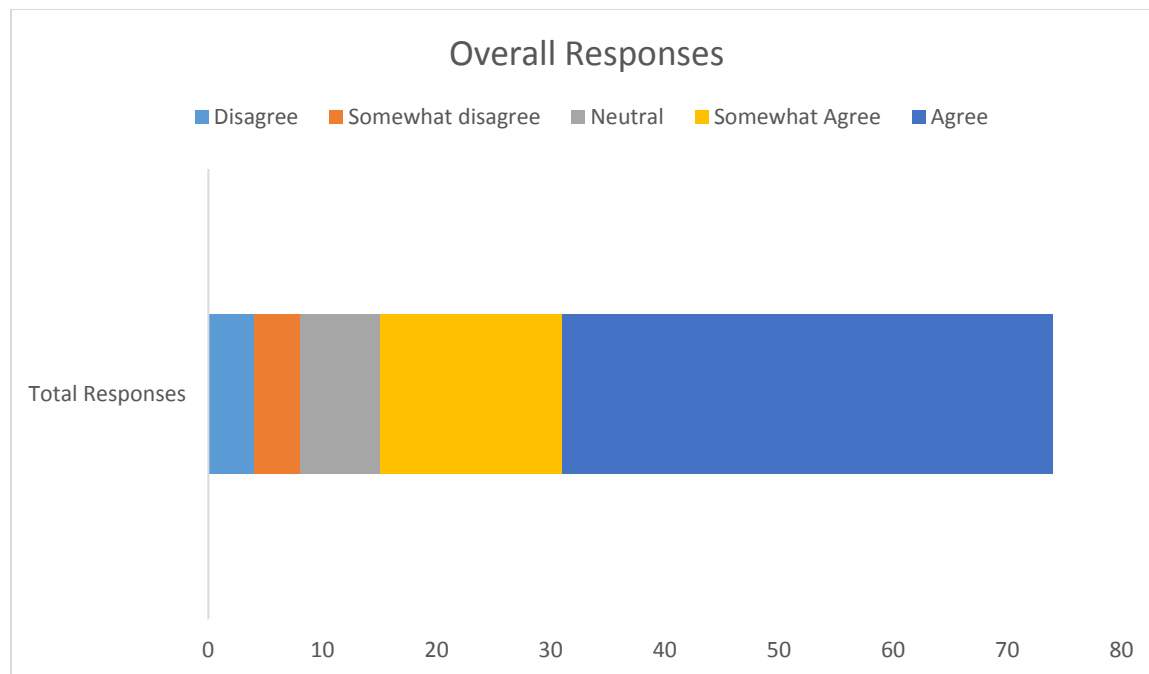
## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

During Summer 2016, Stormwater Outreach for Regional Municipalities (STORM) led an effort to survey jurisdictions in Western Washington about the outreach section of the Phase I and II municipal stormwater permits. The following are the results of the survey. Results include multiple choice answers and additional comments submitted by jurisdictions.

1. 72 out of 92 Western Washington municipal permittees responded to the survey
2. It is important that jurisdictions continue to use the Puget Sound Starts Here campaign to raise awareness about stormwater runoff and the simple steps residents can take to prevent pollution. Public awareness is an important issue that will make residents more open to behavior change. Implementing awareness programs on a regional basis is more effective, because it provides a consistent and effective message to residents about the problem. The awareness section of the permit should be clarified to make it clear that promoting the Puget Sound Starts Here campaign meets the intent of this section.

Overall Totals: 4/4/7/18 (25%) /43 (59%)



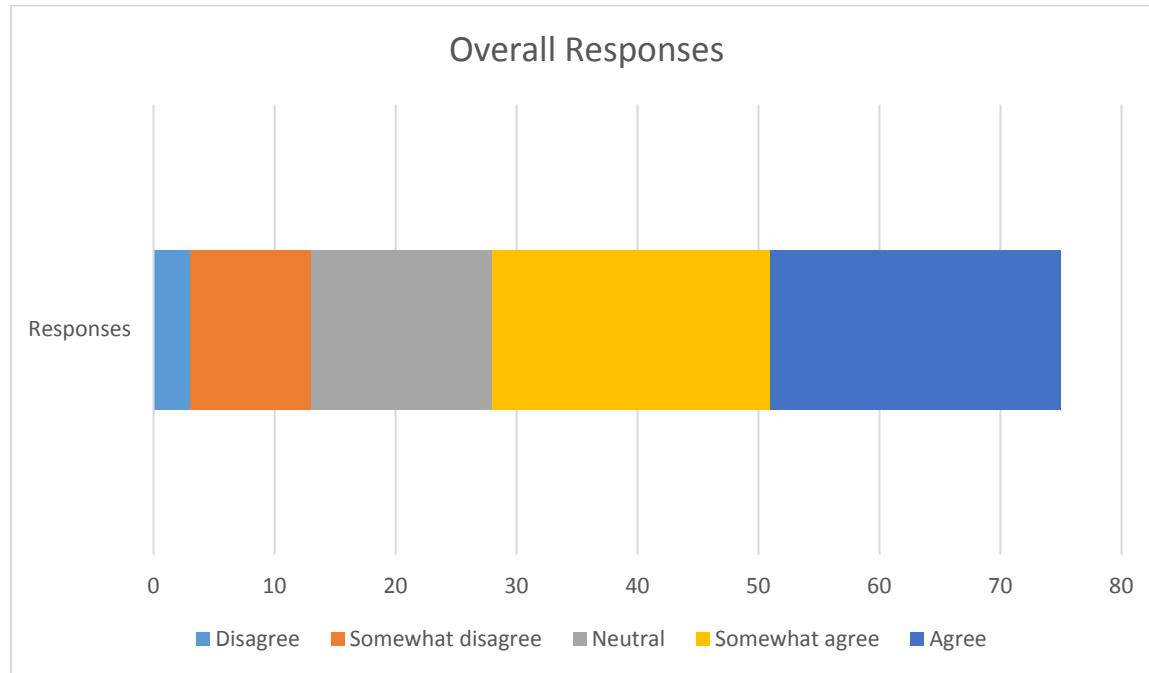
Comments were generally positive towards using the Puget Sound Starts Here campaign as meeting the awareness and education component of the permit. Most critiques of the premise of the question revolved around the difference between western Washington and the Puget Sound region; not all jurisdictions meet both criteria and the messaging may not be applicable to jurisdictions along the Columbia River or Willapa Bay. Other respondents questioned the messaging of PSSH directly. A few were concerned that there wasn't a way to measure the effectiveness of the campaign. These folks didn't dispute the value of a regional approach to education and outreach, but rather if PSSH was an effective precursor for behavior change. One respondent questioned if PSSH was meaningful for diverse audiences compared to more direct messaging like, "Dump no waste, drains to streams". The gist of several comments was that the regional messaging behind PSSH should be revisited.

## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

3. Ecology should require a regional or statewide spill hotline and encourage jurisdictions to work regionally to promote it.

4/10 (14%) /15 (21%) /23 (32%) /24 (33%)



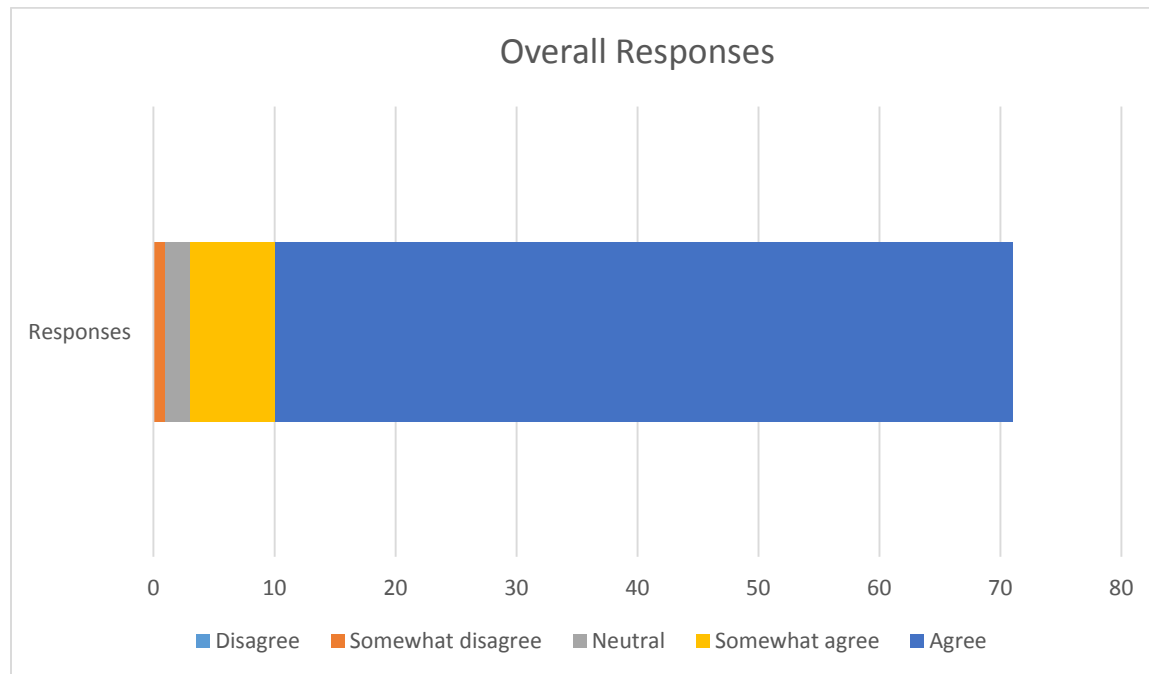
Attitudes expressed in comments were divergent, many respondents had differing ideas about how a new regional or statewide spill hotline would look. Some wondered about the existing ERTS system, and thought it worked fine, while still more would like to see a reworking of ERTS – to either combine spills IDDE for a unified stormwater hotline, or increased funding and staffing. The largest criticism of the idea, a regional/statewide hotline to be promulgated, wouldn't be as responsive or effective as local lines since they are more responsive and geographically knowledgeable. A few respondents supported the idea of a single number to call for folks by noting that people often don't know which jurisdiction to call, they may not know where they are, and that it should be as easy as possible for citizens – something a single number does. A handful objected to being required to support it, preferred it to be optional, and were concerned about how such an effort would be funded given ongoing funding concerns at the state level.

## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

4. Jurisdictions should be allowed to choose those behavior change programs which are most relevant and will have the most impact in their jurisdiction in order to focus time and resources. They should not be required to implement every behavior change program prescribed in the permit. For example, jurisdictions should have the ability to choose to focus outreach on those topics related to a TMDL or identified water quality program in their jurisdiction. Phase 1s have been required to implement programs not relevant in their jurisdictions, which has been detrimental to the quality and reach of all of their outreach programs.

0/1/3/8 (11%) / 63 (86%)



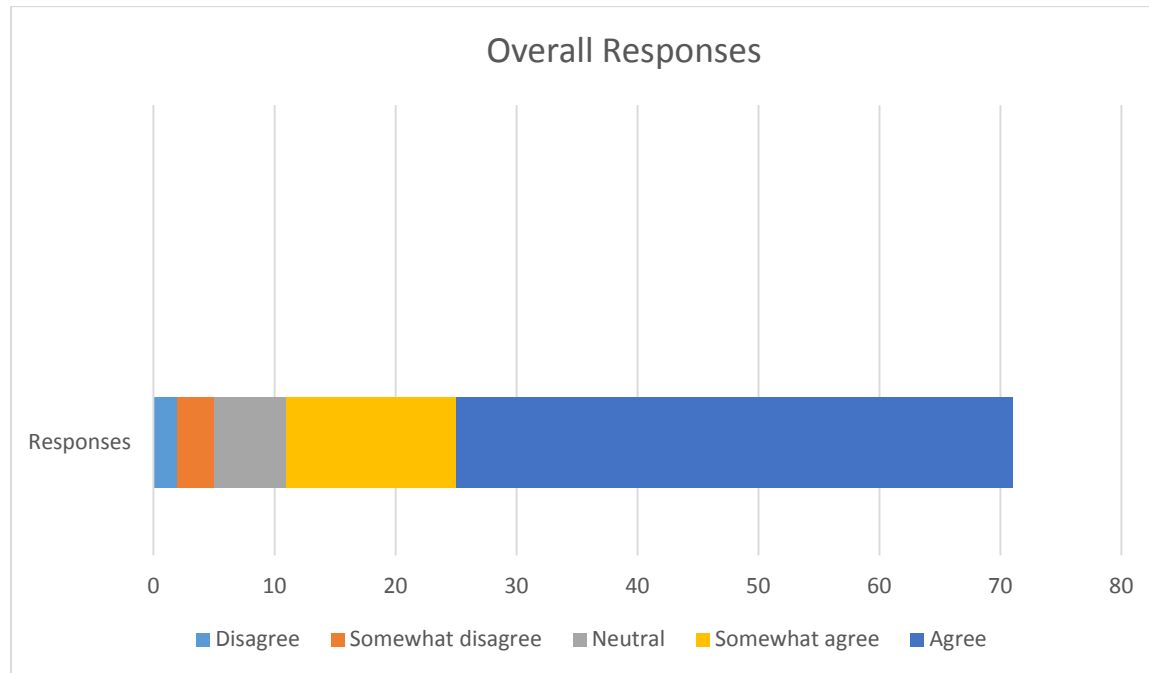
The majority of comments for question 4 were positive. Commenters remarked that they strongly agreed with the idea of flexibility based on local needs. Many commented that jurisdictions should link outreach programs to local water quality concerns, especially those of highest priority or concern. Some commented that jurisdictions should provide justification, while others did not mention justification. Several commented that implementing programs that are irrelevant siphons resources away from locally relevant programs and wastes public funds. Smaller jurisdictions tended to comment that Ecology or STORM programs should continue to provide quality program examples that could be easily adopted. A few commented that this was more likely a problem limited to Phase 1s, as the permit is currently written, because Phase 2s have flexibility to implement programs of their choice. Two commenters warned that such flexibility should be implemented, however guards should be in place to ensure additional flexibility does not allow jurisdictions to opt-out of implementing outreach programs.

## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

5. The goal of the outreach section of the permit should be to effect long-term, sustainable behavior change related to water quality issues. The 2013 permits made it difficult for jurisdictions to implement effective, long-term behavior change programs. In almost all cases, behavior change programs require years of consistent investment to reach audience saturation, and as such jurisdictions should be required to invest in the same programs over time to be effective. Rather than prescribing a long list of programs, the focus should be on high quality, effective programs.

2/3/6/15 (21%) /49 (67%)



Several jurisdictions commented that this has been less of a problem for Phase 2s, because they have more flexibility in their permit to choose to implement the same program year-after-year, and as such are able to invest more in quality programming. For Phase 1s, this has been a serious struggle - resources are pulled away from high-quality programs to “check-the-box” for implementation of required programs. Several jurisdictions commented that they have had success partnering with other jurisdictions or regional groups to implement stronger programs than they would have been able to implement individually. Several also clarified that this is a generalization – some problems only require short-term programs, while others require long-term investment. Many commented that it should be up to the jurisdiction to determine when a program has run its course either by achieving its goals, or becoming ineffective. In this case, jurisdictions should have the option of changing their programs.

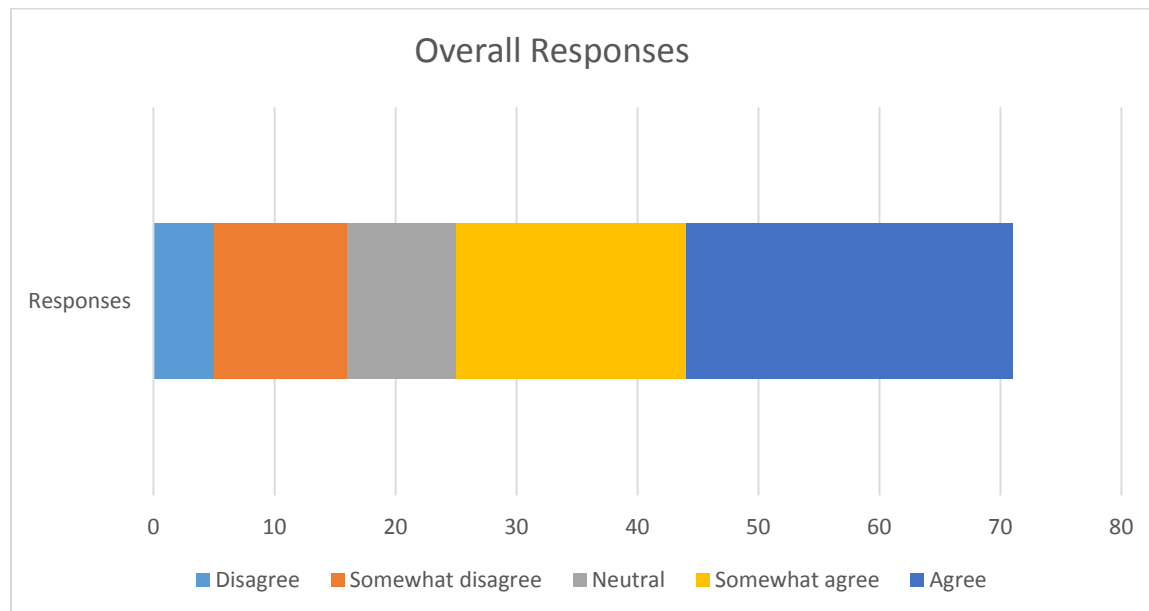


## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

6. Because permittees differ significantly in population size, it would be beneficial to all if the number of behavior change programs required were based on population, not permit type. For example, jurisdictions with a population of 40,000 or fewer should have 1 program, jurisdictions sized between 40-80,000 should have 2 programs, jurisdictions 80-120,000 should have 3 programs, jurisdictions 120-200,000 should have 3 programs, jurisdictions 200-400,000 should have 4 programs, jurisdictions with more than 400,000 should have 5 programs. Allowing jurisdictions to make program investments proportional to the population of that jurisdiction will result in more resources invested in fewer, high quality programs, instead of spreading funding over many low-quality programs.

5/11 (15%) / 11 (15%) / 20 (27%) / 28 (38%)



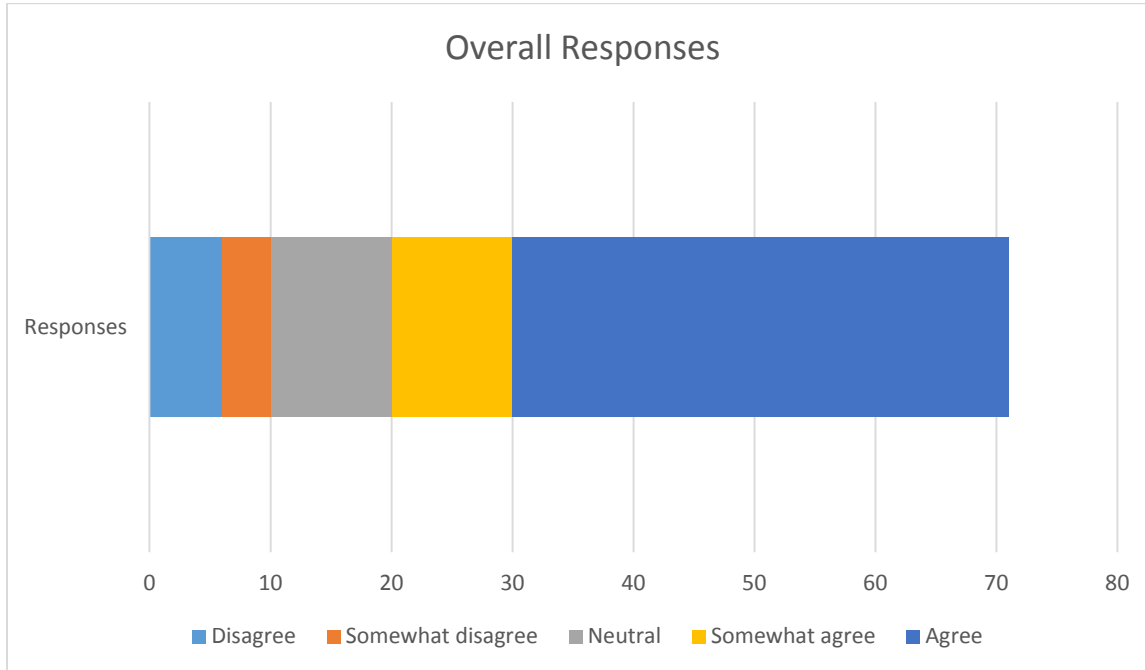
While many jurisdictions agreed that the number of programs required is problematic, many commented that correlating the number of required programs to population is not the right approach. Some commented that there are jurisdictions where water quality concerns are significant despite small population size. They argued that burden of program implementation should be higher based on the number of water quality concerns, not population size. Several commented that even at the proposed levels this approach could spread resources too thin, proposing only one program focus per jurisdiction. Many commented that the approach of jurisdictions doing multiple programs leads to hastily implemented programs instead of deeper, higher quality programs. A few commented that regional or watershed approaches allow for jurisdictions of all sizes to implement high quality programming. A few commented that partnerships should be incentivized.

## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

7. The permit should continue to include the requirement for jurisdictions to provide opportunities for stewardship activities. Jurisdictions like receiving credit for good work such as this, and it provides an excellent opportunity to form partnerships with non-profit organizations working locally.

6/4/10 (14%) / 12 (16%) / 43 (59%)



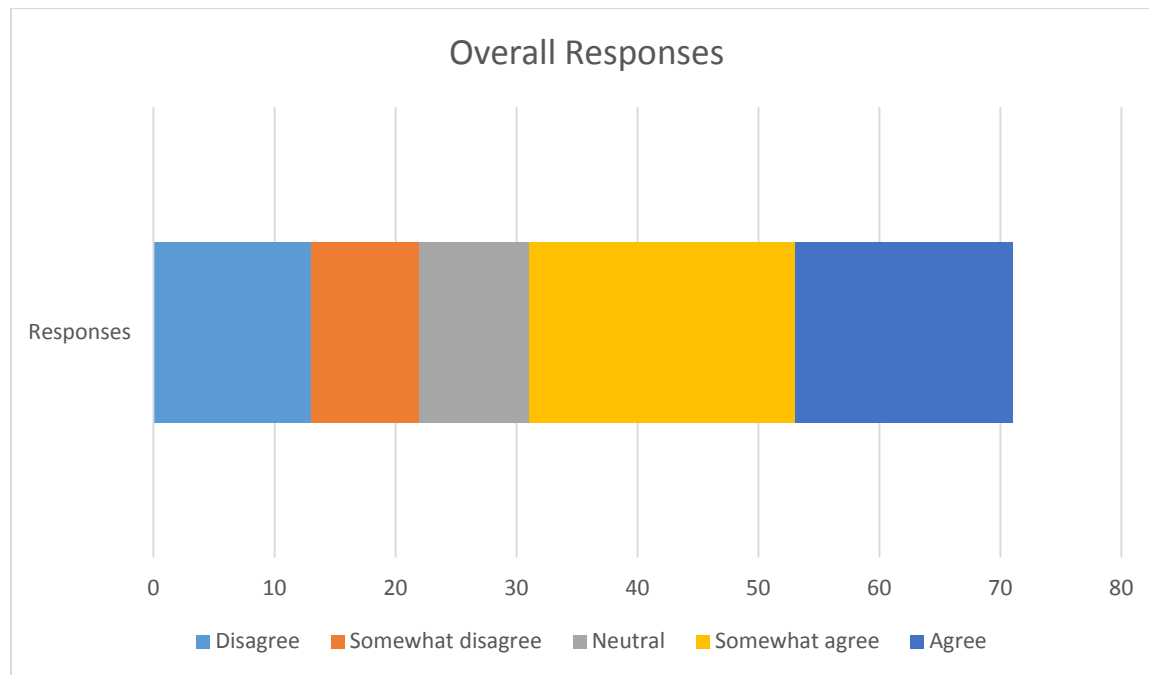
A near-consensus narrative from the comments was that the permit requirement of providing opportunities for stewardship activities was vague and difficult for the smaller jurisdictions who lack a specific education and outreach full-time staff person. Many offered ways to, as they saw it, improve the permit. These included having Ecology provide a guidance document on the activities that qualified as stewardship, incentivizing rather than requiring stewardship partnerships, or goals for what should be accomplished. Though most respondents favored partnership for stewardship, some questioned the need for including NGOs, or using partnerships on water quality problems compared to other activities like restoration work. Though generally receptive, respondents expressed a preference for loosening stewardship requirements while clarifying the options jurisdictions had to fulfill the requirement.

## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

8. A modest amount of funding for regional awareness and behavior change programs should be required under the permit (for example \$1,000 per year for Phase 2s and \$5,000 per year for Phase 1s). Jurisdictions would be required to have representation on regional or sub-regional committees to direct how this funding is used. This funding could be used for long-term programs such as non-profit partnerships, maintenance and improvement of online tools, program evaluation, audience research and STORM network coordination.

13 (18%) / 9 (12%) / 10 (14%) / 24 (33%) / 19 (26%)



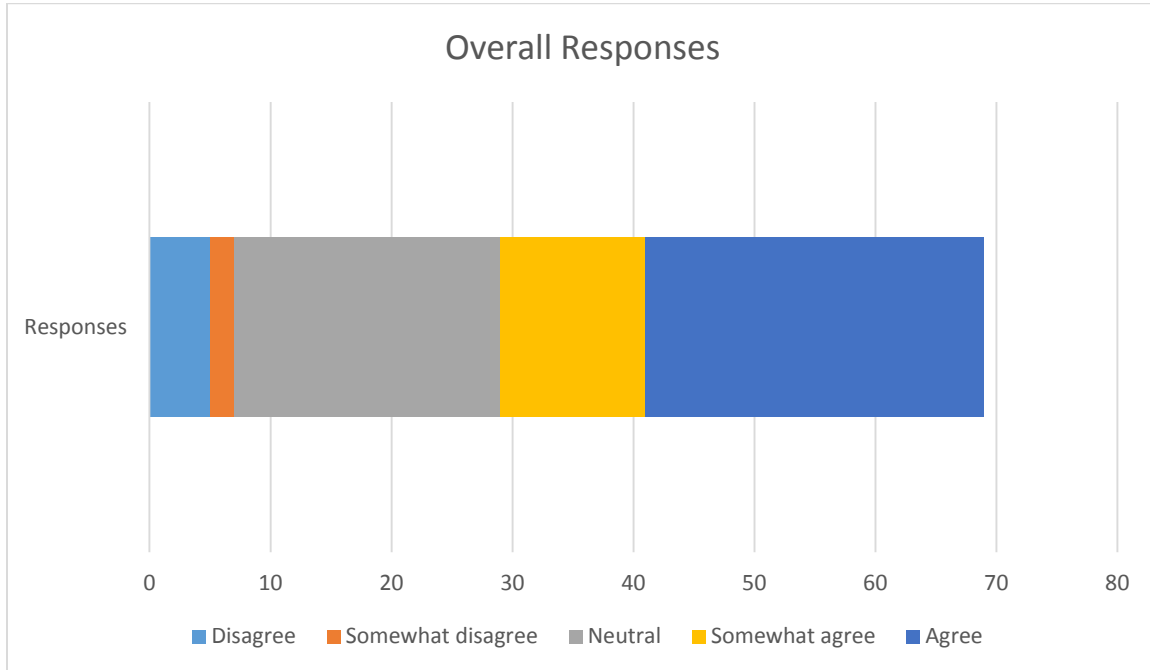
A seemingly consistent view was that pooling dollars for regional awareness campaigns was reasonable likely more impactful than non-regional efforts. Conversely, that sense didn't apply to behavior change. More respondents held that that was best done at the level of the specific jurisdiction in order to better meet citizen concerns, jurisdictional needs and be justifiable. Many smaller jurisdictions objected to being tasked to serve on an additional committee. They saw it as burdensome on their resources and disliked travelling to far-flung meetings. Others, both Phase I and II permittees, considered a fee-based approach to be an over-reach of the permit. A handful thought this a mission for STORM, assuming it would credit towards permit compliance and meeting attendance was not mandatory. Jurisdictions outside the Puget Sound Region were unsure how it would benefit them.

## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

9. Phase 1s and Phase 2s should be encouraged to develop campaigns that serve a multicultural audience, as appropriate, to build equity into programs. Demographic information and community knowledge should be used to determine whether a multicultural approach is needed.

5/2/23 (32%) /14 (19%) /29 (40%)



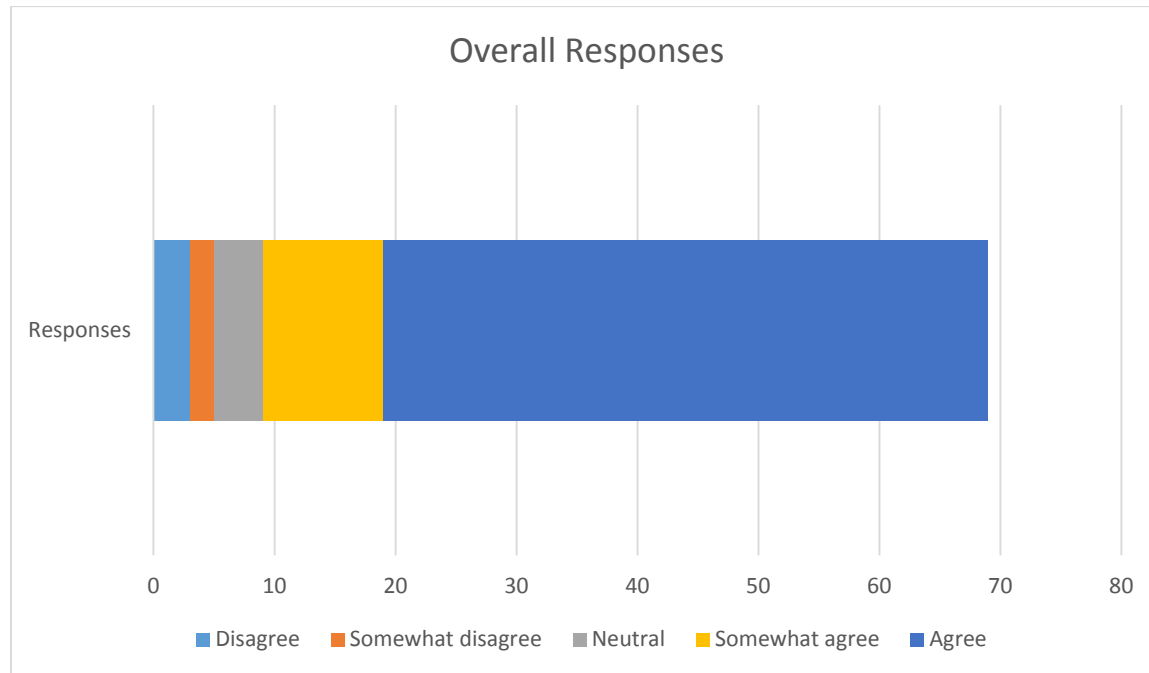
The majority of comments for Question 9 were neutral or to some degree in agreement with the statement. There is agreement among these respondents that addressing these barriers will provide more equitable and effective programs. There is support that the approaches be based on jurisdiction demographics, as each jurisdiction has different needs for this element. Among those that disagree or are neutral regarding the statement, there is concern over lack of capacity amongst smaller jurisdictions and an interest in this work being done regionally. Some also think that this should be encouraged but not required in the permit. There is also interest in addressing urban vs. rural audiences and addressing age diversity.

## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

10. The permit should continue to include the option for jurisdictions to implement awareness and behavior change programs and evaluation individually or as a member of a regional group. The permit should encourage jurisdictions to work together and share resources rather than develop programs in a vacuum. Smaller jurisdictions often recreate the wheel or invest in programs that have previously been deemed unsuccessful without looking outside their jurisdiction. Continuing to promote regional collaboration will result in more effective and consistent programs with wider reach.

3/2/4/12 (16%) / 52 (71%)



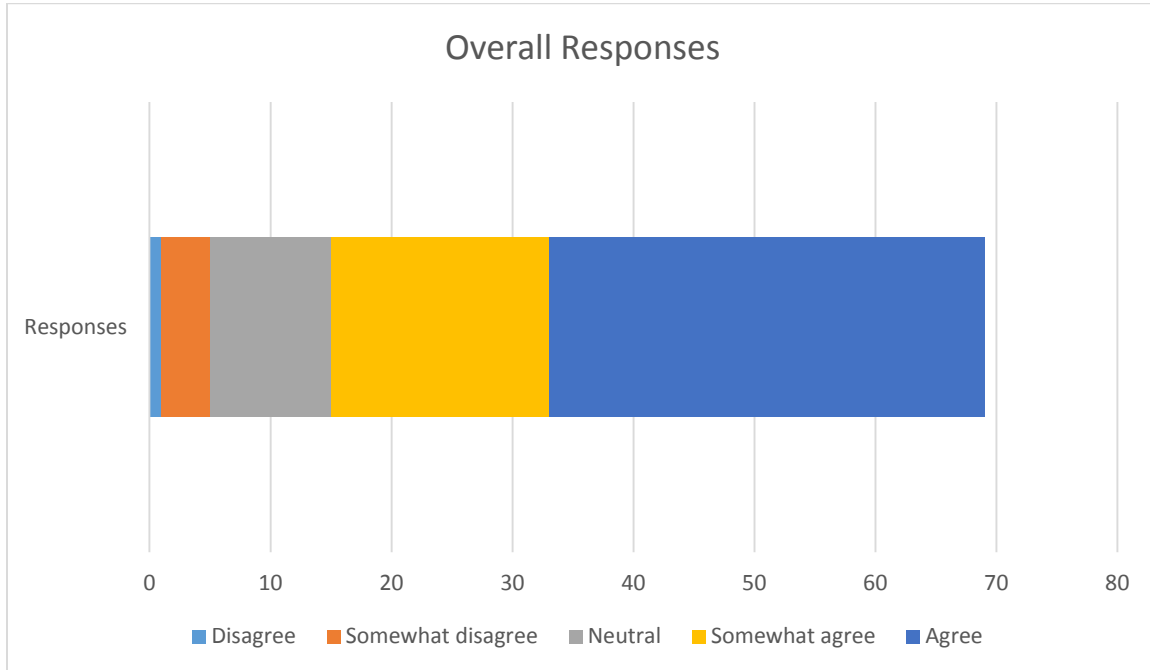
The majority of comments for Questions 10 were in strong support of the statement. There is agreement with almost all parties that there should continue to be the option of implementation and evaluation at the individual or group level. Many also stated that collaboration should continue to be encouraged but not required. There were also comments supporting evaluation of programs at a regional level rather than at local level. Many respondents, both those that agree and those that disagreed with the statement, took exception to the sentence, “Smaller jurisdictions often recreate the wheel or invest in programs that have previously been deemed unsuccessful without looking outside their jurisdiction,” considering it an incorrect assumption. There were also multiple statements asking for more support from Ecology – training, resources related to program development.

## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

11. Target audiences should be removed from the permit altogether or provided as suggestions that jurisdictions may choose from as appropriate for their jurisdiction. The way that target audiences are currently referenced is confusing and unnecessary.

1/4/12 (16%) /18 (25%) /38 (52%)



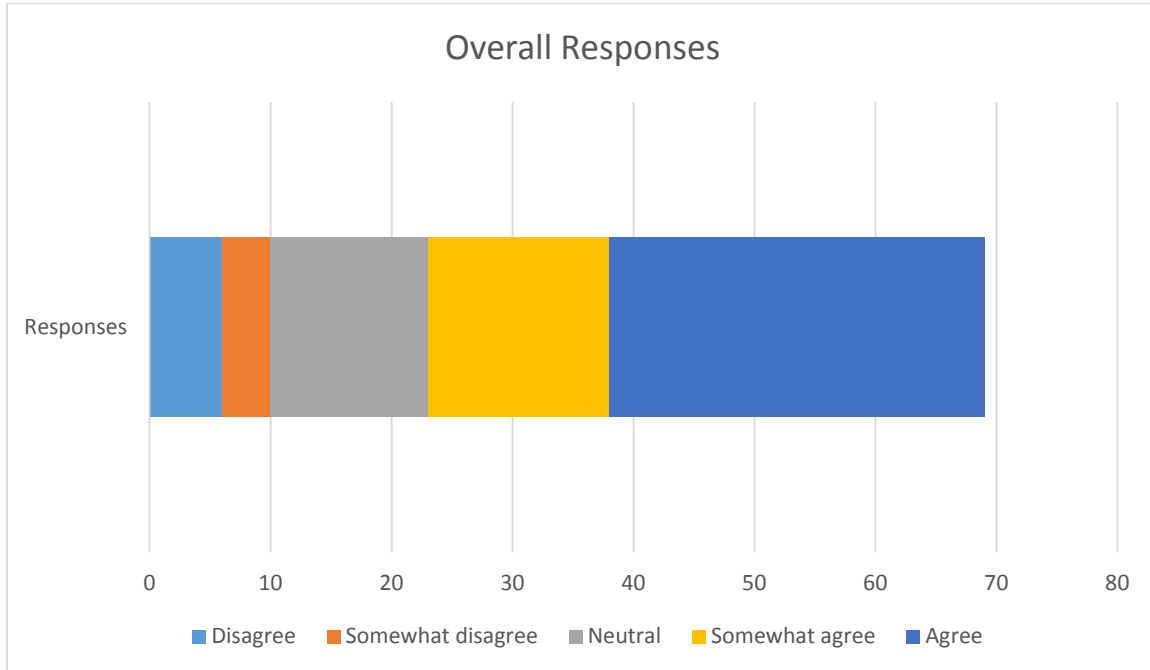
The majority of respondents are in agreement with providing suggestions or examples of target audiences, with less than 1% in disagreement. The commenters were concerned that not all jurisdictions have similar audiences and to allow for some flexibility and local analysis. Other concerns were that messages for targeted audiences may be helpful to other audiences. The audiences for each action should be very clear, to not allow too small an audience focus, and allow for certain groups such as youth.

## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

12. The listing of subject areas and target audiences should remain in the permit, however jurisdictions should have the option of implementing listed programs or implementing alternate programs justified by local data.

6/4/13 (18%) / 17 (23%) / 33 (45%)



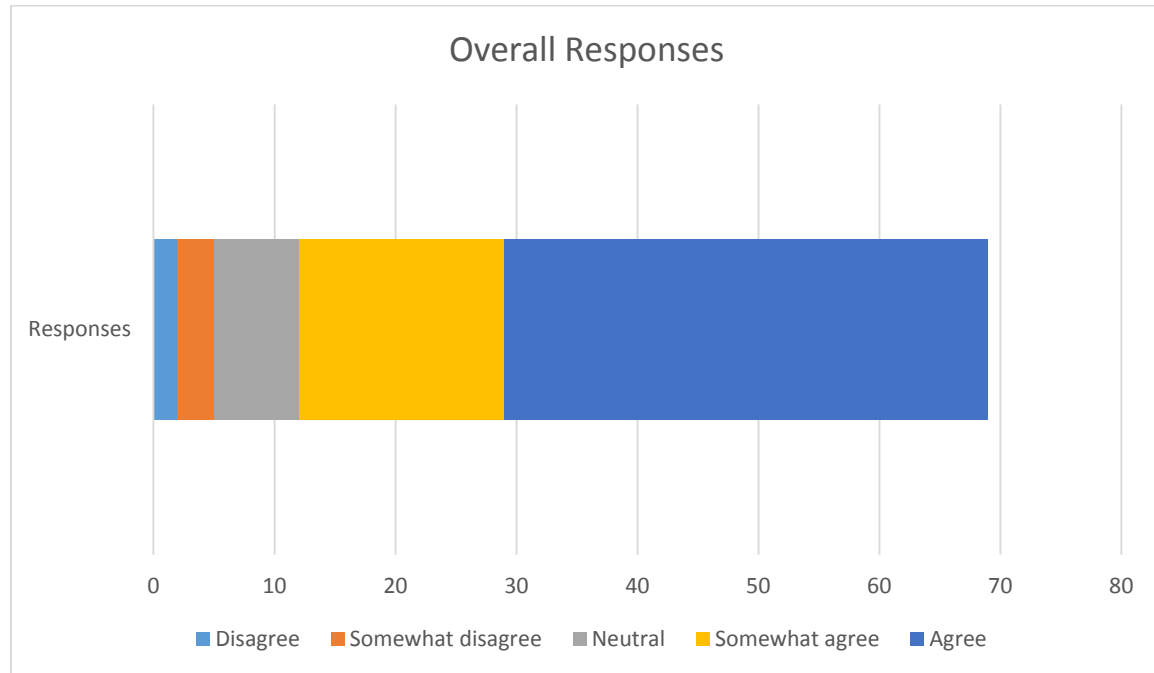
The majority of respondents are in support of giving jurisdictions the option of using local data to implement listed or alternative programs. Commenters asked to allow for justifying alternate programs without data, that a revised or optional menu of focus areas would be helpful to coordination, that flexibility and local circumstances and data matter, that justification requirements should be strong, that new programs may come out of local efforts, and that bench marks for permit compliance are needed.

## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

13. Ecology should place all communications, training and outreach requirements in one section of the permit, or cross-reference such requirements in the outreach section to help permittees better understand their outreach workload. For example, public participation related to the SWMP and training related to IDDE should be co-located or cross-referenced in the education and outreach section of the permit.

2/3/7/18 (25%) / 43 (59%)



The majority of comments were in support of this option and thought it would be helpful and at the very least should be cross-referenced for clarity. Those opposed thought it was either okay the way it is now or felt that communication, training, education and outreach were all separate categories.

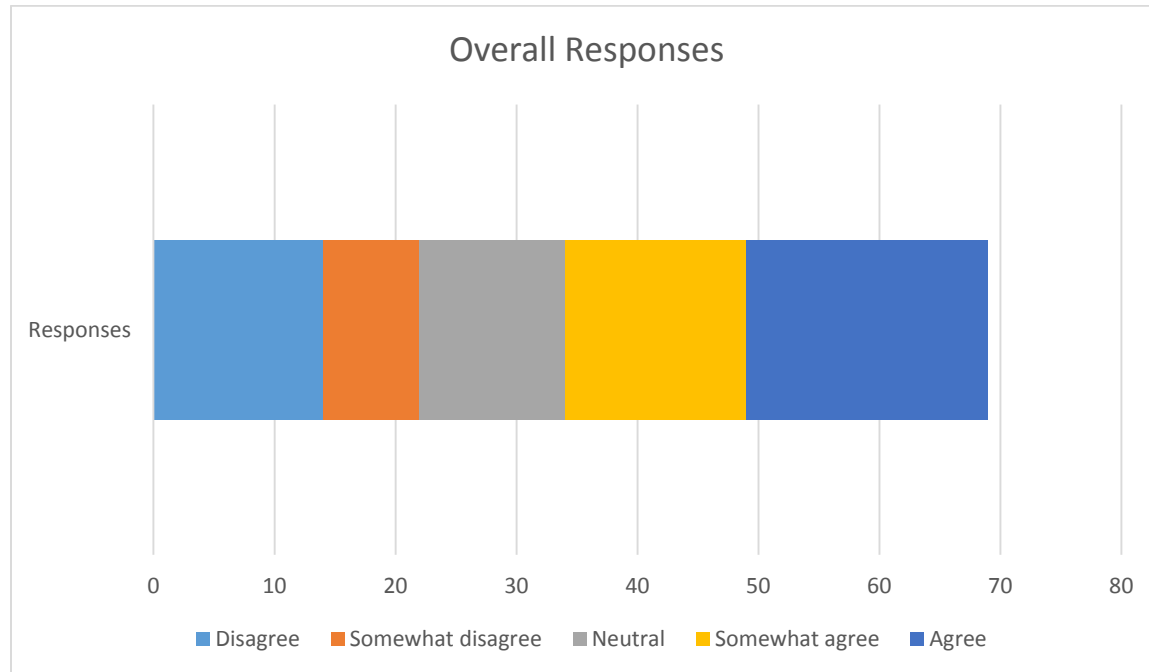


## 2018 NPDES Permit Outreach Section Survey of Jurisdictions

For more information, contact Tiffany O'Dell, Pierce County (253) 798-2468; [todell@co.pierce.wa.us](mailto:todell@co.pierce.wa.us)

14. Within the first year of the new permit, jurisdictions should create an outreach plan identifying those topics and methods they will address during the permit cycle. To guide selection of behavior change program topics and audiences jurisdictions should compile and study locally specific information and regional information (IDDE reports, 303d listings, local source control, TMDL reports and demographics, behavior surveys) and use this information to identify the most relevant and effective programs for their area. These plans could be developed as an individual jurisdiction or in partnership with other jurisdictions on a watershed or regional basis.

14 (19%) / 8 (11%) / 14 (19%) / 15 (21%) / 22 (30%)



The vast majority of comments were not in support of this option stating that this is already in the required SWMP, it is too difficult for smaller jurisdictions, this didn't align with budget cycles, or that this should be done at the regional scale only. Those in favor of this option wanted this requirement to allow for modifications, be encouraged but not required, be in lieu of something, or be required at the end of the permit term to allow sufficient time and not compete with other efforts.

**Please send feedback to:**

Don McQuilliams – City of Bellevue [DMcQuilliams@bellevuewa.gov](mailto:DMcQuilliams@bellevuewa.gov)

NPDES Adhoc Group Summary

Illicit Discharge Detection and Elimination

The IDDE subtopic group met on 7/13 in Bellevue. Participation was low with only three in attendance and two on the phone. Our conversation initially focused around the differences in how and when we report out spills to the ERTS system and from that what is determined to be an Illicit Discharge. This ranged from only reporting large major spills that enter water bodies as illicit discharges to classifying anything that enters the MS4 as an illicit discharge. From this conversation it was clear that we need some guidance as to what constitutes an illicit discharge. We recommend that Ecology weigh in on this to provide their thoughts and intentions when the permit language was crafted.

Additionally we discussed the reporting requirements around illicit discharges. We found it curious that since we already report spills via ERTS then why do we report illicit discharges on the annual report as well. It would be nice if this information could be kept in a central database rather than redundant records by both the Cities and Ecology. We also talked about potential categories for severity of spills and illicit discharges, something along the line of a 1-5 scale to get a better understanding of the size and magnitude of these events and using this information to right size an IDDE program going forward. Staff training as well as contractor trainings was touched on briefly towards the end of our discussion and there may be opportunity here to define a region wide set of training topics so we are all consistent in the message we are giving.

Through the message board Ecology provided some clarification for the ERTS reporting and a couple links to help with further guidance...*The ERTS reporting does not include all of the information necessary to answer the IDDE annual report question (information related to actions you took to characterize, trace, and eliminate ID). We are looking into how we can use our reporting systems to ease the G3 and IDDE reporting. The 2012 response to comments document is also a good resource on this topic - starting on pg.*

109: [www.ecy.wa.gov/programs/wq/stormwater/municipal/MUNIdocs/2012comments/2012RTC/Part1.pdf](http://www.ecy.wa.gov/programs/wq/stormwater/municipal/MUNIdocs/2012comments/2012RTC/Part1.pdf) (attached)

An additional question was also raised through the message board surrounding the effectiveness of fields screening and asked if there is a better way to find illicit connections. Ecology also provided clarification here as well as a link... *And regarding field screening - the current permit language was written to provide flexibility, the CWP guidance is listed in the permit, however an additional resource was developed by King County, Stormwater Center, and Herrera with Ecology funding: [www.wastormwatercenter.org/illicit-connection-illicit-discharge/](http://www.wastormwatercenter.org/illicit-connection-illicit-discharge/) (not attached)*

- From this conversation, the issues on the table are do we need a better definition of what constitutes an IDDE or are we OK with leaving it as-is as it provides flexibility for permittees to interpret the reporting best suited to their operations?
- And is field screening an effective tool to continue using?

## Attachment

### **I-12 Illicit Discharge Detection and Elimination (IDDE)**

*Comments apply to the Phase I and Western Washington Phase II permits.*

#### **I-12.1 Clarify overall IDDE program purpose and focus**

**Permit reference:** Phase I – S5.C.8

Western Washington Phase II – S5.C.3

**Commenters:** City of Auburn, City of Bellevue, City of Bothell, City of Bremerton, Clark County, City of Everett, City of Kent, King County, City of Kirkland, City of Longview, City of Marysville, City of Newcastle, City of Port Orchard, City of Poulsbo, City of Renton, City of Sammamish, City of SeaTac, City of Sedro Woolley, Snohomish County, City of Sumner, City of Vancouver

#### **Summary of the range of comments**

- ☐ Concerns with the overall description of the IDDE program, and adding the word —prevent, || because these activities, including prevention, are not possible in all cases and at all times.
- ☐ Suggestions to reorganize the introductory sentence to better follow the language and organization of the section.
- ☐ Clarify the IDDE program applies only to MS4s owned or operated by the permittee that are covered by this permit.
- ☐ Clarify that stormwater facilities owned or operated by third parties are not required to be inspected under the IDDE program.

#### **Response to the range of comments**

- ☐ Ecology revised the overall description of the IDDE program to acknowledge this program is —designed to accomplish the specified activities, and the specified activities now follow the order and language used in the rest of the section. Note that the Phase II requirements in S5.C.3.a (mapping) support —tracing|| illicit discharges, and the requirements in S5.C.3.b (regulatory mechanism) support —preventing|| and —eliminating|| illicit discharges.
- ☐ All requirements in the municipal stormwater permit apply to the MS4s covered by the permits as specified in S1 of the permits. Adding the suggested clause throughout the permit is unnecessary.
- ☐ Ecology clarifies that stormwater facilities owned and operated by third parties and which do not discharge into the permitted MS4 are not subject to the MS4 permit requirements for IDDE. MS4 permittees are required to implement a program that addresses illicit discharges to the permittees' MS4 even when those illicit discharges originate on private property or within stormwater facilities owned and operated by third parties.

## Please send feedback to:

Angela Gallardo – Kitsap County [agallard@co.kitsap.wa.us](mailto:agallard@co.kitsap.wa.us)

### 2018 Permit Discussion-LID

#### Subgroup Issue #1: **Flexibility re: BMP Selection**

The Appendix 1 list approach/hierarchy is too rigid. There are many nuances that can make one BMP work great at one site and fail at another.

##### Ecology Response:

The LID performance standard does provide flexibility that the list approach may not. Infeasibility criteria are broad categories, but are evaluated on a site specific basis.

##### Current subgroup thinking:

The group has discussed revising Appendix 1 language to allow greater functional equivalency, particularly for pervious pavements. To inform that discussion, we are asking for insight into two questions.

- *What is Ecology's general logic for adopting the Minimum Requirement #5 LID Lists?*
- *What was Ecology's the rationale/basis for placing one BMP as preferable to another on these lists?*

#### Subgroup Issue #2: **Adaptive Management**

Emerging technologies/BMPs/knowledge can only be made available through manual and permit modification. This is slow and burdensome and affects our ability to take advantage of the latest thinking. Is there a more efficient way to utilize emerging technologies? A parallel process to TAPE was discussed.

##### Ecology Response:

Ecology must cite a specific version of the SWMMWW in the permit, this provides certainty to local governments and developers. The Pollution Control Hearings Board ruled on this issue (re: referencing specific versions of guidance documented in the permits).

Emerging treatment BMPs (including non-proprietary BMPs) can be evaluated through Ecology's Technology Assessment Program (TAPE), referenced in the manual. WSDOT was successful at creating new BMPs through this program.

##### Current subgroup thinking:

When Ecology approves a stormwater BMP for use based on successful demonstration of the technology through the TAPE program, they write up a General Use Level Designation (GULD) document. The GULD specifies what level of treatment the BMP is approved for and under what conditions of use. For example, the Modular Wetland System's Linear Modular Wetland BMP has a GULD for Basic, Phosphorus, and Enhanced treatment. Could the GULD document include a statement from Ecology that would approve BMPs to meet the LID BMP listing along with conditions of use? Their use would not be required (until the permit is modified) but could be *allowed* at this earlier date. The Permit along with Ecology's SWMMWW would need to be revised to allow the list of LID BMPs to be supplemented with stormwater BMPs approved through TAPE per the specific BMP's GULD and conditions of use.

**\*\*This would only address water quality BMPs, so another mechanism would have to be used to address flow control adaptive management.**

### **Subgroup Issue #3: Bioretention Media**

The group is concerned about exporting pollutants using the current soil mix. Jurisdictions could trigger S4.f notification/planning and be required to implement costly retrofits or replacement of soil in future.

Ecology Statement:

Leaching is only a problem in systems with underdrains. Limits are in place when discharging to a phosphorus impaired waterway. The benefits of bioretention outweigh the negatives. (This is a generalization of Ecology's comments.)

Current subgroup thinking: We are still concerned by this situation. Our comments regarding adaptive management also apply here; our hope that current research will lead to an improved soil standard. Further, there is concern that the current criteria for alternative bioretention soil mixes with the SWMMWW, also does not appear to align with the preliminary scientific results.

### **Subgroup Issue #4: Coordination With Other Areas Of The Permit**

Subgroup feels that more clarity is needed re: expectations relating to GIS, O&M/Inspection, and Source Control for LID BMPs/facilities. Full onsite infiltration removes site from MS4. How will this affect other parts of the permit?

### **Subgroup issue #5: Maintenance/Life Cycle Cost**

When developing the current permit, there wasn't a way to maintain permeable pavement. The market still hasn't found a solution to this problem. If jurisdictions are going to allow ROW improvements to include BMPs like permeable pavements, we need to know how to plan for long term maintenance.

How can we assess cost if we don't have a way to maintain?

Ecology Statement:

Maintenance costs was considered in developing the LID list approach and was considered reasonable in order to meet AKART.

Maintenance costs can be considered when following the LID performance standard.

When following this approach, one can use the range of BMPs in the manual to meet this standard, and choose not to use a particular BMP because of the maintenance.

**Please send feedback to:**

Mark Preszler: King County [Mark.Preszler@kingcounty.gov](mailto:Mark.Preszler@kingcounty.gov)

Colleen Diessner: King County [Colleen.Diessner@kingcounty.gov](mailto:Colleen.Diessner@kingcounty.gov)

**Ambiguity of Permit Mapping Goals:**

Nearly all of the permit changes King County's Mapping section has suggested for the 2018 reissuance relate to struggles with ambiguous terms and goals. This opinion, however, depending on the issue, is not always shared. According to the survey we sent out requesting feedback from other jurisdictions, some participants prefer ambiguity of terms for financial or other planning reasons.

Issue 1: Description of issue with permit language (specify which permit, e.g. PH I or PH II):

(These issues apply to PH I and PH II, though resolving these issues could be tailored to each permit separately.)

**Definition of Terms:**

**'Known'** Permittees are required to map 'known' outfalls and discharge points. There are likely many definitions of 'known' in use throughout the permittees ranging from something like 'actually known' to 'should be known' as in 'you permitted or built it, you should know about it'. Responses were split down the middle.

Yes	45.16%
	14
No	51.61%
	16
Haven't thought about it or don't care.	3.23%
	1

**'Maintain'** The Phase I permit requires permittees to 'maintain' mapping data while the Phase II permit requires ongoing mapping and periodic updates. It could prove beneficial to set standards for maintaining mapping data, including circumstances under which periodic updates are expected. Would both permits require the same language?

Yes on both counts.	51.61%
	16
No on both counts.	6.45%
	2
Yes to data maintenance standards, no to same language in both permits.	16.13%
	5
No to data maintenance standards, yes to samemapping maintenancelanguage in both permits.	25.81%
	8

## 2018 WWA Municipal Stormwater Permit Reissuance

**‘Tributary Conveyance’** Some permittees read ‘tributary conveyance’ thinking stream and then have to translate the phrase and remind yourself that they’re talking about pipes, ditches, and the like. We asked if other jurisdictions agree and if it’s worth changing this language.

Yes on both counts.	60.00%
	18
No on both counts.	26.67%
	8
Yes on double take no on worth the effort.	13.33%
	4

### Issue 2: Description of issue with permit language:

#### **More guidance for identifying ‘associated drainage areas’.**

Yes	74.19%
	23
No	22.58%
	7
Don't care	3.23%
	1

### Issue 3: Description of issue with permit language:

#### **County mapping efforts could extend to include rural areas.**

Yes Phase I & II	48.15%
	13
No Phase I & II	29.63%
	8
Yes Phase I, No Phase II	22.22%
	6

### Issue 4: Description of issue with permit language:

#### **Need for creating a regional or statewide stormwater infrastructure map.**

Yes!!!! This is a great idea!	40.00%
	12
No!!!! Not now and never!	13.33%
	4
Maybe some day, not sure if now's the time...	46.67%
	14

-For those in support of a coalescing map, respondents were mostly split in thirds regarding preference for regional, statewide, or ‘other’ geographic grouping, with just over a third preferring the regional map.

Please send feedback to:

Todd Hunsdorfer: King County Todd.Hunsdorfer@kingcounty.gov

## Monitoring and Assessment

### S8, G9, and Appendix 9

- S8 - General agreement with the recommendations from the Stormwater Work Group.
- G9 - We are proposing that Section G9 of the permit include standardized methods for more accurate comparisons across datasets.
- Appendix 9 - The language in Appendix 9 should be updated to include field sampling, calibrating instruments, and guidance on data validation.



## Please send feedback to:

Anne Dettelbach – City of Kirkland ADettelbach@kirklandwa.gov

### Phase I/Phase II Permit Requirement Cross-check (9/7/2016)

Phase I requirement	Phase II requirement	Subgroup Recommendation	Rationale
<b>COORDINATION</b>			
S5.C.3. Establish and implement coordination mechanisms (with new secondary Permittees) clarifying roles and responsibilities re: control of pollutants re: physically interconnected MS4s.	No specific language re: coordination with new secondary Permittees	No change.	Current Phase II permit language in S6 adequately identifies coordination requirements/ opportunities that meet the same intent. This approach puts onus on secondary permittee.
<b>OUTREACH AND EDUCATION</b>			
S5.C.10. Program targets all audiences and subject areas listed.	S5.C.1. Program selected from listed target audiences and subject areas.	<p>Edit both permits to allow for, promote customization based on relevant audiences and topic areas. Set minimum level of effort. Right-size level of effort to match size of jurisdiction.</p> <p>NOTE: STORM is developing specific recommendations re: this topic.</p>	Sets requirement to achieve clear environmental benefit that is specific to each Permittee. Phase I approach does not consider specifically identified needs/priorities of individual Permittees.
<b>MAPPING</b>			
S5.C.2. Map existing known connections over 8" to tributary conveyances (to all known outfalls with at least 24" nominal diameter)	No specific requirement.	<ul style="list-style-type: none"> <li>Consider adding requirement to map existing known connections over 8" (etc.) to Phase II permit.</li> <li>Phase in compliance schedule over permit cycle</li> </ul>	<p>Important for finding/tracing illicit discharges.</p> <p>Important for addressing spills to interconnected systems.</p> <p>Important for understanding the interconnectedness of the</p>

			system (including identification of illicit connections).
S5.C.2.b.iv Map connections between s/w treatment and flow control BMPs/facilities and tributary conveyances mapped elsewhere.	No specific requirement.	<ul style="list-style-type: none"> <li>Consider adding requirement to Phase II permit.</li> <li>Phase in over permit cycle(s). Possibly, begin with connections from public facilities.</li> </ul>	Supports IDDE program (tracing illicit discharge pathways). Supports O&M. Is necessary to implement full system cleaning option (CBs), and field screening requirements.
S5.C.2.b.iv. Map associated emergency overflows	No specific requirement.	Subgroup did not agree on recommendation.	<p>Emergency overflows are already inspected and maintained as part of facility. Mapping does not provide additional environmental value.</p> <p>Mapping supports asset management and O&amp;M activities.</p>
<b>SOURCE CONTROL FOR EXISTING DEVELOPMENT</b>			
S5.C.7. Application of operational and structural source control BMPs and facilities (if necessary). Inspection of pollutant generating activities at commercial and industrial properties to identify and correct potential polluting activities (through BMP implementation). Application and enforcement of local ordinances at sites with separate NPDES permits. Practices to reduce polluted runoff from application of pesticides and herbicides and fertilizer into MS4.	<p>No specific requirement.</p> <p>NOTE: Conducting business storm system inspections already an option under IDDE field screening to identify illicit discharges to the MS4.</p>	<ul style="list-style-type: none"> <li>Recommend phasing in requirement over permit cycle. Follow same general approach as Phase I (e.g., update ordinance -&gt; inventory of pollutant-generating businesses/sources -&gt; progressive enforcement policy/strategy).</li> <li>Set requirement to visit X% businesses/year. Count each site visit.</li> <li>Avoid setting prescriptive requirement.</li> </ul> <p>NOTE: If added to Phase II permit, may also require revision</p>	<p>Clear environmental benefit of preventing pollutants from being discharged to MS4.</p> <p>Supports, bolsters implementation of progressive compliance strategy.</p>

		of S5.C.3. IDDE language (field screening, ordinance, compliance strategy).	
<b>STRUCTURAL STORMWATER CONTROLS</b>			
S5.C.6. Implement program to prevent or reduce impacts caused by discharges from the MS4. Establish program goals. Implement planning process. Provide list of planned, individual projects scheduled for implementation during permit term.	No specific requirement.	<p>No specific recommendation at this time. Possibly support limited planning requirement. Most subgroup members prefer to wait until Phase I program requirements are refined.</p> <p>NOTE: Another subgroup is preparing specific recommendations for this topic area. Cross-over subgroup would like to review the specific recommendations before putting forth a recommendation.</p>	Results of planning process can be used to support capital/retrofit programs.
<b>ILLICIT DISCHARGE DETECTION AND ELIMINATION</b>			
S5.C.7.iv and S5.C.1.b Progressive enforcement policy to require a site to come into compliance with stormwater requirements	S5.C.3.v Compliance strategy that may need to include application of operational or structural source control BMPs...and/or maintenance of stormwater facilities that discharge into the Permittee's MS4 per maintenance standards established in permit	If implement Phase II source control program (following Phase I model), differences may be reduced.	Additional enforcement tools offer environmental benefit.
<b>OPERATION AND MAINTENANCE</b>			
S5.C.9.d. Annual inspection of CBs and inlets owned or operated by Permittee	S.5.C.5.d. Inspection every two years of CBs and inlets owned or operated by the Permittee	No change at this time. King County CB cleaning effectiveness study will help assess environmental value of more frequent cleaning.	Incremental environmental benefit of more frequent CB cleaning is unknown at this time.

S5.C.9.d.iii. Disposal of decant water per Appendix 6	No specific requirement	Add Phase I requirement to Phase II.	Clarity, programmatic benefit
S5.C.9.b.i. Inspection of treatment and flow control BMPs/facilities regulated by the Permittee	Term “regulated by the Permittee” not found in Phase II permit.	Did not discuss.	
<b>WATERSHED-SCALE STORMWATER PLANNING</b>			
S5.C. Phase I county convenes and leads watershed-scale stormwater planning effort to identify stormwater management strategies that result in full support of “existing uses” and “designated uses” throughout stream. Defined data needs, use of calibrated models, stormwater strategies to be evaluated, reports.	S5.C.4. Participate if located within Phase I county’s selected watershed.	Did not discuss.  NOTE: Another subgroup is preparing specific recommendations for this topic area.	

Possible Screening Criteria (to establish rationale to sync/not specific requirements)

- Leads to improved water quality (better WQ outcome), direct water quality benefit
- Favorable cost: benefit (i.e., represents efficacy/efficiency of work in achieving WQ benefit)
  - E.g., does annual catchbasin screening yield better water quality? If not, why bring forward?
  - Related: does the proposed requirement achieve its intent OR does it need to be modified to better protect water quality
- Provides equity (among permittees); levels playing field
  - E.g., consistent compliance strategies may contribute to greater watershed health
- Promotes, support information-sharing and data comparability
- Offers programmatic benefit or efficiency (i.e., helps us do our job)
- Benefit can be measured and can be used to support decision-making

**Please send feedback to:**

Don McQuilliams – City of Bellevue [DMcQuilliams@bellevuewa.gov](mailto:DMcQuilliams@bellevuewa.gov)

NPDES Adhoc Group Summary

Municipal Operations and Maintenance

On July 7th we had a small discussion about O&M. We kept the conversation focused mainly on the permit language itself rather than diving into the Maintenance Manual. The group discussed making a few changes to the language in the permit that would provide clarification to meet the intent of the permit on when maintenance is required.

For example, under S5.C.5.a.i, the language could be changed to provide clarification....

*"The purpose of the maintenance standards is to determine if maintenance is required that minimizes or prevents pollution from entering the MS4 and ensures the functionality of the structures."*

Another area we looked at was the frequency of inspecting treatment and flow control facilities. We realized through our discussion that we had different views of what an inspection looks like and that there may not be consistency. This came up when talking about wet vaults and whether they are drained for an inspection or not.

Inspecting large facilities is rather time consuming and requires a lot of staff resources (traffic control, confined space entry, system bypass, etc...). What would it look like if we proposed a different inspection style rather than a full annual inspection? We discussed having a bi-annual inspection of these facilities where one year is a regular inspection and the other is a simple visual inspection to ensure the facility is working correctly and that the flow control structure is free of excessive debris and/or sediment. This would significantly save time and resources that are spent on annual inspections of these facilities when it may not be necessary.

Additional discussion from the message board...

A variety of issues have been raised including language around percentage of completed inspections vs. completed repairs and maintenance. How could section benefit from more consistency and clarity?

A quick fix/clarification we would like to see is to modify the permit to state "Unless there are circumstances beyond the Permittee's control, when an inspection identifies an exceedance of the maintenance standard, maintenance [related to facility function] shall be performed..."

This would clarify which repairs are being tracked under the permit and may make it easier to hit compliance targets (currently 100%).

A different fix may be to set a 95% (or whatever) performance measure for meeting maintenance deadlines.

I agree with the maintenance standard suggestion. I will make sure that's documented. I think realistically the 100% makes the most sense, since that language is what's used for when maintenance needs are identified during CB inspections.

Another issue: what should the SWPPP cover? If the BMP laid out in the SWPPP doesn't work, are we still in compliance with permit? [May be able to handle via guidance rather than permit language]

I've always assumed that Management of BMPs are covered in the SWPPP. Since the SWPPP is a living document, as long as the owner of the SWPPP documents any changes to selected BMPs or site maps, the permit holder is still in compliance.

- The issues surrounding this topic are focused on clarification of the language in the permit to allow the permittee to interpret when maintenance is required under the permit and when it is considered maintenance that does or should not be effected by the permit maintenance standards. It appears that there is interest in changing the permit language to add wording that indicates maintenance is required when the functionality of the facility is affected.
- The second issue brought up pertains to the inspection frequency and level of inspection for the larger water quality and flow control facilities. It is recognized that these inspection can be time consuming and that not all jurisdictions are performing the same level of inspection. Should we recommend a change to this language that would either clarify what is expected of the inspection or reduce the frequency of these inspections?
- The third issue for discussion is surrounding the SWPPP; what it should cover and if a BMP is not working, are we still in compliance?

**Please send feedback to:**  
Lorna Mauren – City of Tacoma [LMauren@ci.tacoma.wa.us](mailto:LMauren@ci.tacoma.wa.us)  
Dana Deleon – City of Tacoma [ddeleon@ci.tacoma.wa.us](mailto:ddeleon@ci.tacoma.wa.us)

***NPDES Permit 2018 - Structural Stormwater Controls  
(Section S5C6)***

***“How to address existing sources of Pollution”***

September 7, 2016

**Problem Statement:**

- *How Jurisdictions account for stormwater impacts from existing development needs to be improved in the permit, namely Section S5.C.6. Compliance with Sections S5.C.5 and S5.C.6 need to be coordinated and integrated.*

**Proposal:**

1. Implement a target for water quality benefit as follows:
  - All permitted jurisdictions annually report tons removed.
  - The permit includes a standard method of calculating tons removed for built BMPs.
    - For MR6 and MR7compliant BMPs, a unit removal of 150 lb/acre/year<sup>1</sup> is suggested.
    - For retrofits not meeting MR6 or MR7, a reduced removal would be used.
    - Once built, a BMP would generate the same pounds removed each year, provided the facility is maintained. Existing BMPs would be included as long as they are properly maintained.
  - The permit includes a standard method of projecting tons removed for operation/maintenance BMPs such as sweeping or pipe cleaning. However, only measured tons removed per year would be reported for these BMPs.
  - Targets for tonnage removed per year would be set based on area contributing to the MS4.
  - Appendix 11 would change into a form that projects actual removal for the coming year and tabulates actual removal for the past year.

Note that: We are considering tonnage removed from BMPs regardless of their being treatment or flow control.

2. Maintain current strategy for hydrologic benefit: continue tracking in a format similar to Appendix 11; however no targets would be applied at this time. We believe flow reduction could be added into a future permit as a program enhancement.

This is an example of how a calculation could work.

**Example:**

**Built BMPs:**

Bioretention/ Permeable Pavement	X	150 lbs/ac/yr <sup>1</sup> (commercial)	X	Acres	=	lbs TSS removed annually
-------------------------------------	---	--	---	-------	---	--------------------------

**Maintenance:**

**Sweeping**

Residential <sup>2</sup>	159 lbs/mi					Projected or measured lbs
Commercial <sup>2</sup>	192 lbs/mi	X	Miles Swept	=		Sediment removed
Industrial <sup>2</sup>	262 lbs/mi					annually

Line Cleaning ..... Measured lbs removed annually

Sum values: Total Removed

- 1- City of Tacoma's Average TSS Loading per acre for Commercial land use, 2009-2012. Use local data or Average TSS loading as calculated from the stormwater characterization monitoring conducted under the 2007 Phase I permit.
- 2- Estimated values from Table 23. Road surface street dirt removal rates dry sediment per curb mile swept every other week. Street Sweeping for Water Quality Business Case Study No. 1, Seattle Public Utilities, Project No. N730702 U06, January 13, 2010.

As a case study for this approach, we have included City of Tacoma efforts and resulting pounds removed per year using the preceding calculation.

City of Tacoma's Appendix 11 reported values (50 square miles):

Water Quality Benefit	Estimated TSS Reduction or Measured Total Solids Removed, pounds				Average Tons per sq mi/year
	2013	2014	2015	Avg	
Built BMPs (TSS Est. repeated yearly)	none	2,628	2,817	NA	Small but increasing
Maintenance (measured total solids removed):					
Line Cleaning	1,538,000	392,000	491,648	807,216	varies
Street Sweeping	7,766,000	7,150,000	7,306,584	7,407,528	74
Total	9,304,000	7,544,628	7,801,049	8,216,559	82

According to the preceding calculation, City of Tacoma currently is at 82 tons/sq mile/year based on solids removed. This metric, tons/sq mile/year, can be estimated from other jurisdictions' Appendix 11 submittals and used to establish a benchmark for setting the quantity of removal that might be required of a jurisdiction in the next permit.

***Additional Topic: Compliance with Sections S5.C.5 and S5.C.6 need to be integrated***

Tacoma's understanding is that once a facility is identified for retrofit under S5.C.6, on Appendix 11, it cannot be used for mitigation for development or redevelopment. In an urban environment, this restriction in the planning phase adds unnecessary constraints. The following are some ideas for improvement:

If the future permit has numeric values to achieve for solids removal, perhaps Appendix 11 becomes obsolete. Compliance with C6 would be on the reported tons removed. Or, perhaps Appendix 11 becomes only a planning document that lists a variety of methods to meet required removal levels, but the activities could be used for either S5.C.5 or S5.C.6.

Should Appendix 11 continue to represent a required strategy for achieving removal levels for S5.C.6, then our recommendation is that the form includes the ability to designate portions of facilities to S5.C.5 and remaining portions to S5.C.6. These distributions would be tracked. The same BMP capacity in no case could be used for both S5.C.5 and S5.C.6 (i.e. no double counting).

Example: Treatment is built for a 100 acre basin. 20 acres of that basin is commercial area. Appendix 11 would include retrofit for 80 acres at 150lb/ac/year = 6 tons for the SSC program. But 20 acres would be held in reserve to sell to developers for mitigation.



**Please send feedback to:**

Danielle Shaw: Washington Environmental Council [danielle@wecprotects.org](mailto:danielle@wecprotects.org)

**2018 Stormwater Permit Subgroup: Watershed Planning  
Guiding Principles**

**Current Permit Feedback**

- The current Phase I watershed planning requirement is too prescriptive in its approach to be applied more broadly. A better balance needs to be struck between prescription and flexibility.
- Current language in the first paragraph presupposes stormwater is the primary cause of harm to existing and designated uses. Recommendation to change language in first paragraph of permit requirement from "result in" to "fully support," then add the language of "that contribute to."
- The price tag and resource commitment required under the current Phase I watershed planning requirement has proven a heavy lift and would be overly burdensome on smaller Phase II jurisdictions as well as an unsustainable path for Phase I jurisdictions to continue to pursue.
- The current modeling results are not generating transferrable knowledge to build the case that high initial expenditures can produce payoffs by helping reduce the price tag for other watershed plans.
- Some of the prescriptive requirements do not translate well across jurisdictions or watersheds. For example, B-IBI data is not always an appropriate biological assessment tool for certain types of waterbodies.
- Additionally, current prescriptive requirements are not beneficial for generating output to help inform flood control programs and other basin planning efforts, potentially proving counterproductive as resources are driven from those efforts towards this resource-intensive requirement.
- Implementation, evaluation, and adaptive management were neglected in this permit requirement.

**Guiding Principles for 2018 Watershed Planning Requirements**

1. *Regulatory Purpose*
  - The purpose of the watershed planning requirement is the protection and restoration of the beneficial uses of our water bodies.
  - To meet this purpose, the requirement should generate a planning tool to guide and target capital actions (e.g., retrofits, facility improvements, restoration) and programmatic efforts (e.g., education and outreach, O&M, source control, land use planning, etc.) that support stormwater management efforts to achieve clean water and ecological function goals.
  - This purpose is environmental. This planning tool should focus on stormwater, recognizing that the impairments are likely tied to a broader set of pressures/sources.
2. *Outcome-Based Requirement*
  - The requirement should be reframed by its intended outcome: guide stormwater management investment and programs that contribute to healthy waterways.
  - The discrete outcome could be a generating a list of prioritized actions and/or targeted programs necessary to contribute in achieving clean water goals within a 5-year permit cycle. One example of a discrete outcome could be a certain number of stormwater retrofit projects.
3. *Increased Flexibility*
  - An outcome-based requirement could allow more flexibility in the approach to achieve the prescribed outcome.
  - The diversity of watersheds and jurisdictional capacity and resources should lend to a more flexible and effective watershed planning requirement than what the current Phase I permit language allows.
  - The scale of the planning effort needs to be flexible as well. Some might be multi-jurisdictional and large in scale, others might be small and within one jurisdiction. The permit should not

predetermine an acceptable size. Though cross-jurisdictional collaboration should continue to be supported when the watershed prioritized crosses jurisdictional boundaries.

- To that same point, the way watershed sizing has been described in current Phase I requirements should not be applied to Phase IIs. Smaller jurisdictions may only be able to manage their watershed as a microcosm within a greater watershed.
- A watershed plan should (1) prioritize a watershed, (2) identify impairments, (3) identify and execute projects or actions to address impairments, (4) assess effectiveness, and (5) adaptively manage.
- A flexible and effective planning requirement may not necessarily prescribe modeling assessment tools. Though, the watershed prioritization process, identification of impairments, and priority actions should be based on accepted, defensible scientific and analytical methods.
- The permit requirement should be focused on a planning tool instead of data and modeling. Some data will be needed on watershed characteristics but the emphasis should be to determine what the Permittee thinks the waterbody needs from a stormwater management standpoint.
- The identified projects and actions to address impairments should help inform, guide, and prioritize other program areas contained in the permits, such as outreach and education, retrofit planning, capital projects, business inspection, pollutant source identification, and data gathering.
- This process can be achieved in a variety of ways and flexibility fostered as long as scientifically and analytically defensible and transparent to enable accountability.
- Department of Ecology (or other Ecology-approved entity, perhaps a subgroup for SWG) should develop guidance/methodology to support/direct Permittee work. This will be especially useful for smaller jurisdictions. Possibly, follow approach in IDDE field screening or LID code update.
- Overall, we seek planning permit language that allows for effective and defensible process that provides actionable information to support stormwater management efforts that contribute to clean water.

#### 4. *Transparency & Accountability*

- Overall, the watershed planning requirement must balance flexibility (Permittee-designed approach) with accountability (discrete, trackable permit performance measures).
- Strong public review processes (with opportunity for involvement and comment) along with accountability mechanisms must be included to ensure transparency, effectiveness, and compliance.

#### 5. *Broader Application*

- As long as the watershed planning requirement is structured with enough flexibility to not overly burden smaller jurisdictions, this permit requirement should be expanded to all Phase I and Phase II local government permittees.

**Commented [LS1]:** Just a heads-up that this may raise concerns of double dipping as one of the sellable points of the regional monitoring program was to relieve individual jurisdictions the burden of having to conduct monitoring on their own.

**Commented [ZH2]:** Could this be funded by SWG effectiveness studies funding?

Email sent 10/6/16 from John Palmer/EPA R10 to Abbey Stockwell  
Subj: EPA Early Input on 2018 MS4 Reissuance

Hi Abbey,

Thank you for the opportunity to provide some early initial input on the re-issuance of the 2018 municipal stormwater permits for Western Washington. Please find below some suggestions from EPA:

- 1) EPA recommends Ecology collaborate with stakeholders to develop MS4 permit requirements for watershed-based planning/stormwater water retrofits. Currently, there is not a comprehensive stormwater retrofit strategy for Puget Sound. EPA believes the MS4 permits should incorporate appropriate requirements to help develop such a strategy. At a minimum, EPA envisions that Phase I and Phase II jurisdictions above an appropriate, to-be-determined population threshold, be required to have a basic stormwater retrofit program. Such a program should include: identification of high priority basins/outfalls for retrofitting; a list of prioritized projects; a list of projects to be completed within a five year permit cycle; and an accounting of jurisdiction and grant expenditures. In developing their retrofit programs, jurisdictions should be strongly encouraged to coordinate with other jurisdictions within a watershed and reference broader watershed scale (e.g., WRIA) plans, such as salmon recovery plans. We also note that the recently completed *Building Cities in the Rain* document could be used to guide local jurisdiction retrofit planning efforts.
- 2) EPA recommends Ecology consider including street sweeping as a mandatory component of the required Stormwater Management Programs for regulated MS4 jurisdictions. In particular, EPA supports the development of a mandatory minimum street sweeping requirement for roadways with high pollutant runoff potential in Western Washington. In many areas of the country, street sweeping has proven to be an effective and low cost method to reduce pollutant discharges from roadways. EPA encourages Ecology to continue evaluating whether a minimum street sweeping requirement in Western Washington is appropriate for controlling pollutants from the regulating MS4s to the maximum extent practicable.
- 3) EPA recommends that Ecology review the existing exemption for On-Site Stormwater Management (also referred to as the low impact development (LID) requirements) applicable to projects that discharge into "flow control exempt" waters of Western Washington (e.g., that directly discharge into large rivers and/or Puget Sound). It is important to assess whether the current treatment requirements are sufficient to protect Puget Sound, and to determine if certain minimum LID requirements should be required for such projects in order to reduce pollutant loadings to these important waterbodies.
- 4) EPA recommends Ecology consider how well the regulated jurisdictions have met the current requirement to revise their development related codes to make LID the preferred and commonly-used approach to site development. Based on this review, Ecology should consider whether minimum requirements for LID-related codes should be established.
- 5) EPA encourages Ecology build upon on the recent assessment of the Source Identification Information Repository (SIDIR) work under the Illicit Discharge Detection and Elimination (IDDE) program requirements. Future refinement of the SIDIR work could include creating or refining the existing database that allows regulated MS4 jurisdictions to track data that is relevant to the

individual or group of permittees, in particular by including the ability to record the location or geo-referencing information to observe spatial patterns of illicit source problems within watersheds over time.

We look forward to discussing these suggestions with you and working with Ecology and stakeholders on the re-issuance process.

Thanks,  
John



**PUGET  
SOUNDKEEPER®**



**WASHINGTON  
ENVIRONMENTAL  
COUNCIL**



October 7, 2016

Abbey Stockwell  
Washington Department of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600

**RE: Early Comments on the 2018 NPDES Municipal Stormwater Permit Update**

Dear Ms. Stockwell,

On behalf of the below listed representatives of the environmental community, we write to provide our feedback as you prepare to draft the 2018 NPDES municipal stormwater permit. Our organizations are concerned about the declining health of Puget Sound and Washington waters. Today, polluted runoff is our biggest source of toxic pollution in Puget Sound. Polluted runoff threatens our iconic salmon runs, our vibrant economy, and the health of our communities.

We see the NPDES municipal stormwater permit as a critical tool to address this threat, as well as support a much needed paradigm shift in the way we develop land. The permit must strengthen with each reissuance as experience and new information can help hone the permit's effectiveness. Progress is particularly critical for the 2018 update in several key sections, as outlined below. Additional technical details are provided in Attachment A.

Our overarching feedback includes: streamlining of Phase I and Phase II permit requirements so that, ultimately, the two permits can be combined into one permit; strengthening low impact development, site planning, and retrofit requirements to fully support recovery of Puget Sound's waterways; and using clear, concise permit language matched with decisive, enforceable requirements to effectively accomplish this goal.

**1. Strengthen Low Impact Development Requirements**

Low impact development (LID) best management practices (BMPs) are generally more protective of water quality than traditional stormwater management practices and constitute all known, available and reasonable methods of prevention, control and treatment (AKART) and are required to reduce the discharge of pollutants to the maximum extent practicable (MEP) and achieve compliance with water quality standards.

LID BMPs absolutely must be implemented in a comprehensive and directed way in order to protect water quality. Furthermore, implementation needs to happen without delay. We need to protect our waterways now—rather than waiting until it is too late. The 2018 permit update must ensure continued

implementation of LID BMPs. We do not support proposals for more flexibility in the hierarchy because certain LID BMPs should be prioritized over others, such as full dispersion over stub outs as it is effective and less expensive where it can be incorporated into a site design.

In addition, the infeasibility criteria in the 2012 Stormwater Management Manual for Western Washington contains overly conservative infeasibility criteria that prevent LID BMPs from being used in areas where they would be both effective and safe. Currently, the 2012 Stormwater Management Manual for Western Washington deems permeable pavement (BMP T5.15) and bioretention (BMP T7.30) to be infeasible where native soil saturated hydraulic conductivity is less than 0.3 inches per hour.<sup>1</sup> That standard limits application of these important BMPs in many areas of the state. However, studies show permeable pavement and bioretention are effective even in soils with native soil saturated hydraulic conductivity of 0.15 inches per hour.<sup>2</sup> Clearly, the 0.3 standard should be revisited to reflect emerging science.

Ecology must clarify for permittees the reality that infeasibility criteria may only be used to determine infeasibility of particular BMPs in particular areas. The determination must be site by site. These criteria were never intended to provide municipalities with blanket jurisdictional determinations of infeasibility—and, unfortunately, they are being used in this way by some municipalities. Added clarity on this point should alleviate this confusion.

Finally, we expect to see stronger requirements around LID principles and practices in the 2018 permit update, including but not limited to BMPs for new and redevelopment. This is necessary to fulfill our collective vision of LID features and concepts becoming the new norm around Puget Sound.

We urge the Department of Ecology to consider placing a heavier emphasis on preventing the generation of polluted runoff onsite, as opposed to managing it after the fact—more emphasis on site planning, with the goal of preserving native vegetation, soils, and other features that retain rainfall, would help in this regard. This effort goes beyond the scope of a local government's stormwater department, requiring coordination across departments, jurisdictions, along with outreach to developers and the public. This effort was alluded to in the LID code updates requirement in the last permit update. However, limited oversight and enforceability of this permit requirement undermined its value.

## **2. Evolve Retrofit Requirements**

The current permit's retrofit obligations are limited under structural control program and source control program requirements.<sup>3</sup> There are requirements to inventory and plan but no directive for retrofit action. There is no sense in planning and taking inventory if these measures are not acted upon.

Our already built-out infrastructure—developed without stormwater treatment—is our biggest challenge as we all work together to reduce the impact of stormwater in our local waterbodies. While we need to avoid repeating the mistakes of the past with new and redevelopment BMP requirements, we must also

---

<sup>1</sup> Phase I Permit Condition S5.C.5.a; Phase II Permit Condition S5.C.4.a; 2012 Stormwater Management Manual for Western Washington Volume V BMP T5.15, BMP T7.30.

<sup>2</sup> PCHB No. 12-093c, March 2014, pg. 65 (citing to Ed Obrien's: testimony), <http://www.ecy.wa.gov/programs/wq/stormwater/municipal/pchb12-093c12-097FindFactConLaw&Ordr.pdf>.

<sup>3</sup> Phase I Permit Condition S5.C.6.a; Phase I Permit Condition S5.C.7.b

turn the tide on existing pollution generating surfaces. This can be supported by operational measures, such as pipe cleaning and increased street sweeping, but capital retrofits must be prioritized as well. Specifically, capital retrofits that mimic natural hydrological functions and support low-impact development principles and practices. As we look to the future, we need sustainable solutions that can support unknown scales of population growth and climate change impacts.

### **3. Restructure and Expand Watershed Planning Requirements**

Watershed-based planning and management is key to achieving clean water. Polluted runoff must be managed in reflection of ecological realities. To this remark, we also strongly recommend watershed planning efforts link to land use planning efforts in a real and tangible way.

We can support increased flexibility for the watershed assessment and planning process if paired with clear outcome expectations, strong transparency and accountability mechanisms, and broader application to all Phase I and Phase II permittees. We see tremendous value in watershed assessment and planning informing the rest of a permittee's stormwater management program, including capital and operational actions, as well as land use planning and policies.

However, to be clear, we expect data collection where data gaps exist, interim deadlines to track progress, and accountability measures including a public engagement process and opportunities for stakeholders to provide comment. In addition, while we support more flexibility, it is important that plans and data developed in different jurisdictions not be completely incompatible. There is a benefit to these plans and data sets informing other watershed and regional management efforts over time as well as facilitate coordination across watersheds.

We strongly encourage the Department of Ecology to deliver methodology guidance if a more flexible process is pursued. This guidance should be similarly structured to the guidance offered for IDDE and LID code updates and similarly incorporated by reference into the 2018 permit update. The environmental community would seek to provide input in the drafting process of this guidance as well.

### **4. Reduce Pollution Accumulation in MS4s**

We urge the Department of Ecology to require all municipal permittees to conduct routine pipe/line cleaning and require more timely removal of polluted sediments from stormwater facilities. Line cleaning has proven successful in areas where it has been implemented. We believe it is now essential to this permit and will result in real benefits in keeping polluted sediments, trash, and debris out of Puget Sound. As described in more detail in Appendix A, the Department of Ecology should require routine line cleaning in all three alternatives available to Phase I and Phase II municipalities, and incorporate maintenance standards for pipes akin to what exists for Industrial Stormwater General Permit permittees.

We also propose that Ecology develop more guidance (checklists, training, etc.) to maximize the effectiveness of field screening for illicit discharges. The new permit should require municipalities train staff on what to look for and how to document illicit discharges so that they are constantly on the lookout for illicit discharges – whether during a site inspection or on routine field screening. We further urge

Ecology to require municipalities to conduct more public outreach to inform citizens about illicit discharges, and advertise reporting hotlines, so that the general public can also assist with these efforts.

We further urge Ecology to require that permittees remove contaminated sediments from catch basins within one month of triggering maintenance standards, and from other facilities within six months of triggering standards. We also strongly recommend that Ecology add clarity to requirements around illicit discharges and reporting by requiring minimum annual screening requirements that support continual screening over the permit term.

## **5. Expand Source Control Requirements**

Source control is a vital component of preventing the flow of pollutants to Puget Sound. Thus we collectively urge the Department of Ecology to adopt the same source control requirements for Phase II municipalities that presently exist for Phase I permittees. Further, we recommend the permit update require improved efficacy of source control programs by specifying that *all* source control inventory businesses be inspected during a permit term, and that inspection reports contain more information about how inspected properties are regulated, which BMPs are being implemented, discharge locations and pollutant pathways.

## **6. Require Summary of Known Water Quality and Flow Problems and Education/Outreach Plan**

We strongly recommend a reporting requirement that articulates “known problems.” This could be incorporated into the annual reporting requirement if the annual reporting requirement is strengthened. We envision this as a one or two-page document, to be submitted within the first year of the permit cycle, describing current water quality and flow problems in the entire jurisdiction and organized by watershed. Future watershed planning and outreach/education work would be stronger if local governments were able to articulate their water quality and quantity problems and use this information to better prioritize their programmatic efforts. We know from talking with staff in different jurisdictions that they have a good working professional knowledge of their stormwater-related water quality and flow problems. We suggest that this document be concise and high level and also identify data or information gaps.

In addition, we recommend that a new requirement (ongoing into future permit cycles) be added to the Education/Outreach section, for a short, high-level summary of the jurisdiction’s planned programs addressing the ‘known problems’ document described above. The “Outreach/Education Plan” would be tailored to each jurisdiction and would include strategies for each target audience for each problem (i.e. the plan for fulfilling permit education requirements, based on the known problems for the jurisdiction). This important element of planning is needed in order to improve the quality of education and outreach programming both locally and regionally.

## **7. Increase Transparency and Accountability**

It is vital that there be meat behind the permit’s planning and reporting requirements. We urge Ecology to increase transparency and accountability in the following sections:

Phase I Permit Conditions S9.D.2 and S9.E.2 and Appendix 12

Phase II Permit Conditions S9.D.2 and S9.E.1 and Appendix 3



Annual reports and Stormwater Management Program Plans must contain more information about permittees' activities to increase transparency and accountability. The current annual reports primarily consist of 'yes' or 'no' questions that do very little to inform the public or the Department of Ecology of the permittee's activities. Some of the questions ask for numeric values but provide no context with which to evaluate the numeric value. Municipalities should be required to provide more informative answers or to submit more supporting documentation so that the public and the Department of Ecology can evaluate their activities.

Additionally, we expect all new permit requirements to occur without delay. The National Pollutant Discharge Elimination System is intended to control and progressively reduce water pollution. We recognize that the last permit was significantly restructured and thus required phasing in of new requirements. We are now beyond that. With this permit, implementation of any new permit conditions must begin early in the permit term so their efficacy can be evaluated before the next permit cycle.

In conclusion, adopting these suggested improvements into the 2018 permit update will allow the Department of Ecology to administer the municipal stormwater permit in a manner consistent with the Clean Water Act goal of eliminating discharge of pollutants into navigable waters and protecting beneficial uses of our waterbodies.

The environmental community was appreciative of the chance to participate in ad hoc conversations around the 2018 permit update with other key stakeholders. While we may not have found perfect alignment with all stakeholders, we did find common ground. We are generally supportive of the ad hoc group's recommendations. However, one key recommendation we cannot support is increased flexibility with LID BMP hierarchy. Additionally, many of these recommendations were kept high level and the devil will be in the details. We, as representatives of the environmental community, may have a difference of opinion as to specific permit language, technical details, and implementation strategies. We request to be kept informed on opportunities to engage in further conversations, focus groups, and provide feedback on draft language.

Thank you for your consideration of this feedback.

Sincerely,

Katelyn Kinn  
Staff Attorney  
Puget Soundkeeper

Danielle Shaw  
Puget Sound Program Associate  
Washington Environmental Council

Heather Trim  
Science and Policy Advisor  
Futurewise

Bruce Wishart  
Lobbyist  
Puget Soundkeeper

#### **4. Reduce Pollution Accumulation in MS4s**

- a. Adjust maintenance standards and requirements to reduce volume of polluted sediment, trash, and debris in MS4s. (Phase I Permit Condition S5.C.9.d, Phase II Permit Condition S5.C.5.b)*

Catch basins and MS4 pipes catch polluted sediment, trash, and debris, but if pollutants are not removed they will eventually leach or flush into stormwater, or cause flooding. Removing sediment, trash, and debris from the catch basins and MS4 pipes is necessary to prevent pollutants from reaching surface waters. Cities that have implemented line cleaning programs have documented substantial pollution reduction in their stormwater discharge.

Currently municipalities are required to inspect and maintain catch basins on a regular basis, or, alternatively, to clean all pipes, ditches, catch basins, and inlets within a circuit during the permit term. Municipalities are not required to conduct pipe cleaning unless they choose alternative 3 (cleaning the entire system in a circuit during the permit term) instead of conducting inspections to determine which catch basins need to be cleaned. Pipe cleaning should be required in all of the alternatives. Like with catch basins, if all pipes in a circuit are not cleaned during the permit term the pipes should be inspected regularly to determine which pipes need maintenance. Municipalities that choose alternative 1 or 2 (regular inspection of catch basins or inspection of catch basins on a circuit basis to identify maintenance needs) should also be required to inspect pipes to identify maintenance needs.

Some municipalities believe that source control activities, such as street sweeping, will eliminate the need for catch basin and line cleaning. Alternative 1 (regular inspection of catch basins and lines to identify maintenance needs) allows municipalities to perform less maintenance if source control activities, such as street sweeping, are effectively preventing buildup of pollutants in the MS4. Under alternative 1, the municipality must inspect its catch basins regularly. The municipality should also be required to inspect pipes regularly. If street sweeping and other source control measures are effectively preventing buildup of pollutants in the MS4, the inspections will show that catch basin and pipe cleaning is not needed.

The three alternatives for maintenance of facilities owned or operated by the permittee should be retained, however pipe cleaning should be included in each alternative. Municipalities should either have to clean all pipes and other infrastructure in a circuit during the permit term (Alternative 3), or inspect catch basins and pipes regularly (Alternative 1) or on a circuit basis (Alternative 2). For municipalities that choose to conduct inspections to identify maintenance needs, maintenance standards for pipes based on the amount of sediment build up need to be established.

Industrial Stormwater General Permit (ISGP) permittees that discharge to a Puget Sound Sediment Cleanup Site are presently required to remove accumulated solids from storm drain lines (including inlets, catch basins, sumps, conveyance lines, and oil/water separators) owned or controlled by the Permittee at least once during the permit cycle. The ISGP requires that the line cleaning operations (e.g., jetting, vacuuming, removal, loading, storage, and/or transport) implement BMPs to prevent discharges of storm drain solids to surface waters of the state. Permittees are required to dispose of storm drain solids and liquids in accordance with applicable laws and regulations. Commenters encourage Ecology to require the same of Municipal stormwater permittees.

- b. Require prompt maintenance of stormwater facilities (Phase I Permit Condition S5.C.9.a(ii)(2), Phase II Permit Condition S5.C.5.a(ii))*

Catch basins and MS4 pipes catch polluted sediment, trash, and debris, but if pollutants are not removed they will eventually leach or flush into stormwater, or cause flooding. Removing sediment, trash, and debris from the catch basins and MS4 pipes is necessary to prevent pollutants from reaching surface waters. Currently municipalities must maintain catch basins within six months of triggering maintenance standard; other facilities must be maintained within a year. Contaminated sediment that remains in pipes continues to pollute stormwater. The current requirements allow pollution to continue for up to a year after the need for maintenance is identified. To prevent discharge of pollutants to surface water, permittees must perform maintenance in a timelier manner.

Permittees have been conducting inspections of catch basins pursuant to operation and maintenance requirements and screening lines pursuant to illicit discharge detection and elimination requirements for several years. Because permittees have been conducting inspections and maintaining records for at least five years, they should be able to anticipate the maintenance their MS4 systems will require each year and budget accordingly. Therefore, it is reasonable to require permittees to respond promptly when a maintenance standard is exceeded.

Ideally, catch basins should be maintained within a month and other facilities should be maintained within six months of triggering the maintenance standard.

- c. Set minimum annual screening requirements (Phase I Permit Condition S5.C.8.c(i)(1), Phase II Permit S5.C.3.c(i))*

We support the idea of better defining requirements around illicit discharge inspections and reporting because there is currently a lack of clarity. The present lack of clarity has invited municipalities to arrive at their own interpretations (with vast variations between permittees). These requirements should simply be clarified.

Screening MS4s is important for detecting and eliminating illicit connections and illicit discharges, and also for identifying MS4 maintenance needs. Municipalities should be continuously working to detect and eliminate illicit connections and illicit discharges and to maintain their MS4 infrastructure to reduce accumulation of pollutants, which requires ongoing screening. Instead of requiring ongoing annual screening, the current permit requirements are based on averages which do not require any particular action in any given year and are difficult to enforce in a timely manner.

The Phase I Permit requires permittees to screen an average of 12% of the permittees' known conveyance systems each calendar year and the Phase II Permit requires permittees to screen an average of 12% of its MS4 each year after December 31, 2017 (although the permit will expire less than a year after December 31, 2017). Currently, a Phase I permittee could conduct no screening in the first four years of the permit and claim that it will screen 60% of its conveyance systems in the fifth year. The permittee would be in compliance with the permit, but would not be working continually to reduce pollution by detecting and eliminating illicit discharges and maintenance needs.

The permit should require screening of a minimum of 12% of a permittee's MS4 each year. Minimum annual screening requirements can be enforced in a timely manner and ensure that permittees conduct screening, illicit discharge detection and elimination activities, and necessary maintenance on an ongoing basis.

## **5. Expand Source Control Requirements**

### *a. Create source control requirements for Phase II municipalities*

Source control is an important component of pollution prevention. Phase I municipalities have successfully reduced pollutant discharges to their MS4s through source control programs required by Condition S5.C.7. Phase II municipalities should also implement source control programs to reduce pollutants in their municipal stormwater runoff. The Phase II source control requirements should include the same components as the Phase I source control requirements, including ordinances requiring operational and structural source control BMPs, maintenance of a source control inventory, site inspections, progressive enforcement, and staff training.

### *b. Specify inspection protocol to improve efficacy of the source control programs (Phase I Permit Condition S5.C.7.b(iii) and Phase II Permit)*

Source control inspections must document whether an inspected property has a NPDES permit in its own right, such as an Industrial Stormwater General Permit, a Boatyard General Permit, or a Construction General Permit. The inspection document must also identify which BMPs are being implemented, discharge locations, pathways by which pollutants are most likely to enter waters of the state, and water quality samples when discharge is occurring. The information described above must be included and memorialized in each permittee's inspection reports. We environmental groups routinely depend on information documented in public records to accomplish our work, and transparency and accuracy in these records is vital to carrying out this work most effectively and efficiently.

### *c. Require inspection of 20% properties/businesses on source control inventory annually and 100% by permit term (Phase I Permit Condition S5.C.7.b(iii)(2) and Phase II Permit)*

To maximize the efficacy of the source control program, permittees should implement an inspection program designed to conduct preliminary inspections of all businesses and properties in the source control inventory. Currently, Phase I Permit Condition S5.C.7.b(iii)(2) requires annual inspection of 20% of businesses and properties listed in a permittee's source control inventory, but the permit does not require inspection of 100% of businesses and properties over a five year period. The permit should require initial inspection of 20% of listed businesses and properties each year and initial inspection of 100% of listed businesses and properties over five years in addition to any follow-up inspections that must be conducted for sites that were not fully in compliance during the first inspection. Requiring permittees to implement inspection programs designed to inspect all listed businesses and properties will reduce discharge of pollutants to MS4s by ensuring that all potentially pollutant generating businesses and properties implement operational and source control BMPs.

## **6. Increase Transparency and Accountability**

Problematic examples from the Phase I Permit questions include:

- Question 4 asks whether the municipality maintained mapping data for the required features. A municipality answers 'yes' or 'no' but does not have to submit maps with the annual report or make a map available on its website. Thus, citizens are unable to identify features of the MS4 or evaluate the adequacy of the maps.

- Question 12 asks whether the municipality has coordinated stormwater management activities for shared waterbodies among permittees and secondary permittees. A municipality answers 'yes' or 'no' but is not required to identify the shared waterbodies with coordinated management, which permittees are coordinating management, or what activities are being coordinated.
- Question 17 asks how many adjustments for new development and redevelopment were granted to the minimum requirements in Appendix 1. A permittee provides a number but does not provide the total number of developments permitted, the number of developments that requested adjustment, or the reasons the adjustments were granted. Without more context the number of adjustments granted provide little information about the permittee's program.
- Question 24 asks how many enforcement actions were taken during the reporting period based on construction inspections. In 2014 the answers ranged from King County, which took no enforcement actions and Snohomish County, which took one enforcement action, to Clark County, which took 3,073 enforcement actions. It is unclear from the annual reports how each county defines an "enforcement action" and without more context, the numbers reported provide little information about the permittees' programs.

The questions referenced are not the only sections of the annual report that need improvement, they are intended as examples to highlight the limited value of the current annual reporting requirements. Annual reports should be useful tools for compliance, and adequately convey the work a municipality is doing to address stormwater pollution so that regulators and the public alike are informed on these efforts.

**From:** Larry Schaffner

**Sent:** Tuesday, September 20, 2016 4:06 PM

**To:** Abbey Stockwell (ECY) <[abst461@ECY.WA.GOV](mailto:abst461@ECY.WA.GOV)>; Vincent McGowan ([vmcg461@ECY.WA.GOV](mailto:vmcg461@ECY.WA.GOV)) <[vmcg461@ECY.WA.GOV](mailto:vmcg461@ECY.WA.GOV)>

**Cc:** Rian Sallee (ECY) <[rsal461@ECY.WA.GOV](mailto:rsal461@ECY.WA.GOV)>

**Subject:** Pre-draft Input on the 2018 MS4 Permit Reissuance

Hi Abbey & Vince,

I thought I would pass this along my thoughts below today as I'm going to be out of the office to tend to some family-related matters for the remainder of the month and wanted to get this in by the September 30<sup>th</sup> input deadline. I would have liked to carve out a bit more time for this, but I've had competing tugs for my attention so this is the best that I could do at this point. I hope you'll find these useful. I'll be back in the office on October 3<sup>rd</sup> should you have any questions.

In addition to the thoughts below, Thurston County staff has participated in several of the Ad Hoc-sponsored subgroups. I would encourage Ecology staff to engage those subgroups in dialogs after reviewing their input to glean richer insight to the thought behind the proposals. While those dialogs have been useful in bringing together permittee and environmental advocacy groups, the original vision of having Ecology engaged in those dialogs too hasn't be fully realized yet. Hopefully, those opportunities will unfold in the future. Thanks for your consideration. –Larry

**Larry Schaffner** | Thurston County Water Resources  
2000 Lakeridge Dr. SW | Bldg. 4, Rm. 100 | Olympia, WA 98502  
[360-754-4106](tel:360-754-4106) | [www.co.thurston.wa.us/stormwater](http://www.co.thurston.wa.us/stormwater)

-----  
S3.A.2. Secondary Permittees should be required to contribute to the RSMP effort.

S5.A.2. Considering the ongoing nature of most of the programs, allow the SWMP to be update on an as needed basis rather than presuming that the SWMP warrants updating on an annual basis.

S5.C.1. E&O section would benefit for further refinements.

- Too many target audiences dilutes the effectiveness of programs and campaigns and risks creating too much “noise” trying to compete to attention. Suggest structuring the requirements to identify a few high priority areas requiring attention to focus the development and deployment of more in-depth campaigns and programs (including stewardship efforts) vs. shallow efforts to a multitude of target audiences. This include stewardship efforts.
- Define how priorities are set (e.g., media markets, SOGs, rural/urban, STORM, north/mid/south Puget Sound, locally identified, etc.)
- Structure the E&O requirements in a way the leads to the development of constant and common messaging.
- Designate a portion of S8. RSMP effectiveness monitoring funds to evaluate E&O program effectiveness.

S5.C.3.a.ii. Mapping receiving waters should not be the permittee's responsibility, but rather a state and/or federal function (i.e., DNR; USGS).

S5.C.3.a.vii. Other than circumstances where the permittee's MS4 discharges directly to surface waters, they may not know the ultimate destination of the discharge (particularly if it's a connect into another MS4 or private system. Thus, Permittees should only be expected to map their MS4 regardless of the discharge's destination.

S5.C.3.c.iv. This language seems more appropriate to include as part of S5.C.1.

It would be helpful to combine all the staff training-related language together (e.g., S5.C.3.c.iii. & S5.C.3.e.).

S5.C.4. For clarity, it would help to explain that the provisions contained in S5.C.4 apply to development and redevelopment that discharge to the Permittee's MS4 (S5.C.4.a.iii. contains related language) and revise language throughout S5.C.4. to improve clarity to that effect (e.g., in the last sentence of S5.C.4.b., add the following: ". . . and discharge to the Permittee's MS4.").

S5.C.4.b.iv. Waiting until completion of construction to ensure proper installation of some types of permanent stormwater facilities (e.g., permeable pavement, bioretention, etc.) would be problematic and key aspects of the installation will not be accessible once construction is completed.

S5.C.4.g. Either the Phase I's Watershed-scale stormwater planning requirement needs to be revisited or the approach and underlying methodology to the requirement needs to be revisited and significantly revised. The reference to "watershed-scale" may be problematic in the context of extending this requirement to cities and Phase 2 counties as a full watershed-scale planning effort may not be geographically available for them to pursue. See recommendations coming out of the Watershed Planning Discussion Group for suggestions on how to address this requirement in the reissued permit. (Thurston County has been actively involved in this discussion group).

S5.C.4. Pertaining to manual equivalency. Provide Phase 2 counties the option to propose limited targeted deviations, with Ecology approval, to reflect context-sensitive regional conditions that aren't adequately reflected in Ecology's SWMMWW or the Ecology-approved Phase 1 manuals. Also offer Phase 2 cities falling within that county the option to adopt the Ecology-approved Phase 2 county manual if they so choose.

S7. Permit writers should work with the TMDL leads to help ensure that the actions that TMDL leads propose for inclusion in the municipal permits are appropriate for inclusion as a municipal permit requirement and are not redundant to obligations that already exist in the permits.

S.8.B.2. Provide a true Status & Trends Option #2, rather than what amounts to a *Hobson's Choice*. Our regional status & trends partnership with the cities of Lacey, Olympia, and Tumwater took a significant hit (~50% funding reduction) which had impacts to the collection of locally actionable monitoring data collected to help inform land use and watershed planning,

policy decisions, and targeting of stormwater- and water quality-related programs and projects. The methodology and data resolution of the RSMP status and trends is of no value for these purposes. We would like to reconstitute these locally driven status and trends monitoring efforts via a viable option that can fulfil local needs as well as rollup into the larger Puget Sound basin's status and trends monitoring efforts. In addition, such a viable pathway safeguards Stormwater Utilities from potentially having to defend itself should ratepayers question the appropriateness of expending stormwater fees to support monitoring activities occurring outside of the utilities' service area.

G3. With the objective of achieve more consistent interpretation, please elaborate on what "constitutes a threat to human health, welfare, or the environment."

Definitions and Acronyms:

- *Stormwater's* inclusion of *interflow* in the definition. The permit's definition for *stormwater* deviates from the definition of *stormwater*, found at 40 CFR 122.26(b)(13):

*Storm water* means storm water runoff, snow melt runoff, and surface runoff and drainage.

Unlike the definition appearing in CFR referenced above, the permit's definition includes the term *interflow*. We understand *interflow* is contained the in the definition of *stormwater* appearing in WAC 173-201A-020. However, the inclusion of *interflow* in the definition becomes problematic for permittees in that it is extremely difficult, if not impossible, to discern the source(s) of interflow. For example, interflow may emerge or comingled from sources other than rainfall such as groundwater, adjacent surface waters, and non-stormwater discharges (surface and/or subsurface). Shouldn't stormwater be consider one of the contributing sources of interflow just as stormwater is a contributing source to surface waters? We would like to understand the purpose and driver for the inclusion of the term *interflow* in the definition of *stormwater*.

- Low Impact Development (LID): We see advantages in making a distinction between "LID" in land use management context (e.g., minimizing impervious surfaces, native vegetation loss, & site disturbance; keeping retaining infiltration rate of the soils; etc.) vs. the stormwater management manual context (e.g., dispersion, infiltration BMPs, green roofs, LID performance standard, etc.). In short, there seems to be a role for introducing the term Green Stormwater Infrastructure (GSI) into the permit and Ecology's manual to help make these sort of distinctions. Several municipalities seem to be taking this an approach and having a common lexicon amongst permittees in this area would help alleviated confusion in communication and messaging.

Appendix 1: Process wise, Ecology's Stormwater Management Manual should undergo rulemaking to avoid the need of replicating the hearing process multiple times at the local level. It comes off a bit disingenuous for local jurisdictions to solicit public review and comment on obligations for which permittees cannot deviate from without putting ourselves out of compliance with our permit.



Appendix 2: Refer to comments pertaining to S7.

Appendix 3:

- Eliminate question 15b (number of hotline calls received)
- Explore opportunities to reduce reporting redundancies between G3 notifications, SIDIR, and Questions 20 & 60, 61, & 62.
- Question 24: It seems like it would be of value to include the basis for the exemption.
- Question 25: It seems like it would be of value to include the basis for the variance.
- Question 63 seems unnecessarily redundant given S4.F.1's notification requirement.
- Questions 66, 67, and 67b seems unnecessarily redundant give G20's notification requirement.

Overall General Comment: Take into consideration the context of cities vs. counties and urban vs. rural in crafting permit requirements and compliance timelines. For example, the larger geographic scope for counties logistically involves more travel time for inspections and operation & maintenance (e.g., travel back and forth to decant facilities). Also, the nature of the MS4 tends to be different with County's tending to have more of an open system vs. cities which then to have piped systems.

## Section

General

General  
General

General

General

S1.f  
S2  
S3  
S5.A.3

S5C.1

S5C.2

S5.C.3

S5.C.5

S5.C.5

S5.C.5

S5.C.6

S5.C.6

S5.C.7

S5.C.7

S5.C.8

S5.C.8

S5.C.8

S5.C.9

S5.C.9

S5.C.9

S5.C.9

S5.C.9

S5.C.9

S5.C.9

S5.C.9  
S5.C.9

S5.C.10

S5.C.10.b

S5.C.10.c.

S5.C.10.c.

S5.C.10.c.

S5.C.10.d  
S7

S8

Annual Report

Appendix 2  
Appendix 2  
G19  
G3

Deinitions and Acronyms  
Deinitions and Acronyms  
Deinitions and Acronyms  
Deinitions and Acronyms  
Deinitions and Acronyms

Issue/Concern
---------------

## Reporting requirements

Permit requirements should tailor approaches to be appropriate for how rural or urban a jurisdiction is.

Need for adaptive management through the permit

## Secondary Permittees

## Training

## Permit Coverage

## Authorized Discharges

## Remove S3.B.1

This requirement does not add value.

Phase II Permit currently suggests a code enforcement program

## Mapping Requirements

## Minimum performance measures for Coordination

Controlling runoff from new development, redevelopment and construction sites.

LID requirements from the previous permit.

New requirements for Basin Planning

How Jurisdictions account for stormwater impacts from existing development needs to be improved in the permit, namely Section S5.C.6. Compliance with other sections in S5.C and S5.C.6 need to be coordinated and integrated.

Exemptions for using grant funding for permit required actions.

Source Control Suggestions

Appropriate terminology in the Source Control requirements for inventory, sites, businesses, etc.

IC/IDDE suggestions

Allowed and Conditionally Allowed discharges

IC/IDDE Training

S5.C.9.b.iii: Inspection frequency during construction

Defining enhanced maintenance.

Operations and Maintenance Topic Group

Maintenance Timeline Exceedences

Requirements associated with catch basins

O&M for new development

S5.C.9.b.v

S5.C.9.e

S5.C.9.f

Effectiveness of Education and Outreach requirements

Stewardship

Public Education

Public Education

Public Education

Public Education

Compliance with TMDL requirements

Monitoring

Annual Report

TMDLs and Basin Planning

Bio-assessment metric for creation of TMDLs

Certification and Signature

Notification of Discharge including spills

LID BMPs

LID

Regional Stormwater Monitoring Program

Significant Contributor

Stormwater Management Program

## Comment/Edits

Elements in the permit that require reporting (i.e. Annual Report) should either:

- Measure level of effort
- Provide useful data that guides regional efforts and permit requirements

Take into consideration the context of cities vs. counties and urban vs. rural in crafting permit requirements and compliance timelines. For example, the larger geographic scope for counties logistically involves more travel time for inspections and operation & maintenance (e.g., travel back and forth to decant facilities). Also, the nature of the MS4 tends to be different with County's tending to have more of an open system vs. cities which Where appropriate, provide outcome driven targets to allow for flexibility in implementation.

King County feels that there should be implementation of secondary permittees' requirements to have permits. Ecology should be expected to identify all secondary permittees, and require them to obtain a permit.

King County feels that training requirements that called out in specific sections of the permit should be consolidated and put into a single training section with definition of intent and information on what staff

King County would like clarity on what parts of the permit apply to property outside its jurisdiction. We recommend that this be viewed through the permit requirements legal ability to dictate action. For example – King County should not be taking enforcement actions on property owned by King County but located in another jurisdiction and King County should use the development requirements of the jurisdiction where that

Allowable and conditionally allowable discharges should be moved to S2.

Suggest removing S3.B.1 from the phase I permit and aligning with the phase II requirement.

This section should be removed, it is redundant and does not add value.

Phase II jurisdictions should be required to implement an escalating code enforcement program

King County advocated for the following:

- King County would like to continue mapping the rural sub-basins. This includes mapping connections 8 inches or larger.
- We would like a mechanism in the permit to ensure that data collected remains current, and that changes are captured.
- We want to ensure that features that have already been mapped match the current definitions. This requirement should be phased, with the goal of working toward a useful regional map.
- We want to phase in the collection of additional attributes to features that are already mapped.
- We think ecology should think about what to include as permit language and what do we include as guidance that moves us to a regional approach?
- We want clear definitions.
- We think the requirement to map facilitates should be clear and explicit.

There should be minimum performance measures for coordination among Phase I and Phase II permittees.

There should not need to be a coordination mechanism for secondary permittees unless the secondary permit

- Provide a long enough timeline for equivalency review that allows for Phase Is to properly address the changes in Ecology's manual.

- S5.C.5.a.iv should be moved C.1 legal authority.
- Ensure vesting requirements are removed from the permit.
- As part of the inspection process, ensure that LID structures and locations are not compromised by construction activities.

Jurisdictions should have time to absorb LID requirements from the previous permit.



King County's preference is that this effort be focused on prioritizing basins and identifying the capital & operational projects needed to restore beneficial uses to the receiving waters. The intent behind this requirement is to be a planning tool to identify and construct capital projects and guide where operational projects will provide the most benefit. King County recommends that the basin planning efforts required in the 2013 permit be completed prior to additional requirements for basin planning. Furthermore, Phase I permittees should be required to build upon the basin planning work already done and use the modeling exercise to develop a more granule and detailed planning tool to inform capital projects and operational stormwater. King County supports the work done by the Structural Stormwater Controls Topic Group. The metric recommended by the topic group focuses on water quality while there is also focused efforts on flow control, especially in areas that are not highly urbanized. There should also be metrics for addressing flow such as storage capacity building on the metrics established in Appendix 11. These comments should be carried throughout the revisions to S5.C.6 and Appendix 11.

This requirement should complement the Basin Planning requirement. List of planned projects should be based on ranked basins.

There should be exemptions to allow grant funding for potential permit required actions that exceed the local regions capacity to fund such as stormwater retrofits and enhanced maintenance (e.g. street sweeping, line

- Ecology should report permit violations of the construction or industrial general stormwater permits to the permittees impacted.
- Use NAICS codes should be used instead of SIC codes.

Suggest changing the language in b.iii.(1), This could be replaced with language to allow permittees to provide information on best management practices for the site during site inspections.

- b.i(7) add clarity on what commingled means and what urban stormwater means. needs discussion.
- d.iv.(1) remove the term illicit? Clarification on the G3 reporting requires reporting for some allowed and conditionally allowed discharges.

King County feels that allowed and conditionally allowed discharges should be moved to S2 under authorized discharges. We ask for clarity and intent behind declaring a G3 on authorized allowed and conditionally allowed

Clarify that staff doing field work on MS4 related activates should be trained on IC/IDDE reporting

The permit requires enhanced inspections during construction but does not account for those sites that go dormant for long periods of time. This requirement would be better located in S5.C.5

Add a new bullet on enhanced maintenance. King County would like to apply capital-based funding to facility repairs that meet bullet (6) but would also like to credit projects that apply area-wide or system-wide efforts. King County supports the O&M topic group on 9.a.ii. Regarding adding a definiiton for function critical structures and that the maintenance schedule applies to function critical items.

King County is advocating for flexibility for exceedances in the time frame for maintenance actions required for flow control and water quality facilities and catch basins. The proposal would allow for minor exceedances of required maintenance timelines to reduce the number of G20s for minor issues. The proposal is advocating for jurisdictions to accomplish 95% maintenance required (instead of 100%) for compliance, with the permittee King County advocates for waiting until the catch basin effectiveness study is completed before editing catch b.iii. Addresses construction activities and appears out of place. It should be in the construction and redevelopment section, consider moving this requirement to S5.C.5. The enhanced inspcetion schedule should Consider this requirement be it's own section "Maintenance of catch basins we regulate". This would add consistency with the other sections. Also, the reference to S5.C.9 should be removed. This will eliminate

King County suggests that this section be simplified and the list be removed and replaced with: the permittee should address potential pollution generating activities on lands it owns or maintains. We also feel that S5.C.9.e should have its own heading titled "Maintenance of lands owned or maintained by the permittee" to Consider consolidating this training requirement to a training section.

- o Giving greater credit and incentive to support focused, regional efforts such as STORM, with effectiveness measures.
- o Reduce the number of audiences and allow the jurisdictions to choose the audiences, with the number of audiences tied to the size and capacity of the jurisdiction.
- o Ensure that the campaigns or education programs have measurable metrics of behavior change.
- o Require permittees to develop outreach plans.

#### Clarifying intent

Add elected officials and policy makers to the targeted audiences and clarify the areas of understanding. Ties back to opening paragraph of S5.C.10

Have requirement in alignment with Phase II language and allow programs to be focused where effective

#### Clarity and consistency

It is not effective to target the evaluation to only "new" audiences and new subject areas. The evaluation of existing programs can provide valuable information that can be used to adapt programs and target audiences in different ways.

Add clarity so that TMDLs may only include "stormwater actions that appear in this permit."

King County defers to the comment letter submitted, and the proportions mentioned in this letter should be reassessed. The only additional comment would be to consider the use of the SIDIR funding for a regional spill King County feels that the data collected should be used to add value to the permit and the data collected by the annual report should do this. There should be clarity on what the intent is behind collecting this data. Consider the publication of data for all jurisdictions to see. The data collected should be used in conjunction with the SWG King County would like Ecology to consider, as an option, allowing the Basin Planning requirements to be met by allowing the development and implementation of TMDLs by the jurisdictions using the 4(b) approach.

King County would like to see a more developed approach on the use of Bio-assessment metrics for the creation Suggest a look at providing guidance for delegation of authority for online submittal

King County suggests making sure contact numbers are still valid. There should be a web form offered as well.

The structures should be defined as green stormwater infrastructure

The 3 principles of structures, behaviors, and practice should be distinguished.

Suggest removing reference to SIDIR

Where is this used in the Permit? If it is not used, why is it defined?

The way MEP and protect water quality are used is redundant and implies that MEP does not protect water

## Resolution

Add language to areas of S5.C that apply to properties located in other jurisdictions: C2, C3, C6, C8, C9.

Provide language that requires both Phase I and Phase II Permittees to implement an escalating code enforcement program

The region would benefit from this time to develop programs needed to effectively implement LID programs. This is in alignment with the LID Topic Group.

King County suggests learning from the 2013 Basin Planning efforts. Since these plans will not be complete in time, King County supports language that allows jurisdictions to undergo a basin prioritization process.

Require jurisdictions to report tons of sediment removed based on area contributing to the MS4 using calculations provided in the permit. Existing stormwater BMPs can be added to the total if the facility is maintained per the permit requirement. This would be tracked through Appendix 11 with a form that projects actual removal for the coming year and tabulates actual removal from the past year.

Provide language that allows for grant funds to be used for certain permit required actions.

clarify S5.C.7.b.iii. (1), because the current wording is not in alignment with the function of the business inspection program.

Consolidate into training section and Provide language to require staff doing MS4 related activities to be trained on IC/IDDE.

Add the following text:

"(7) Maintenance projects that exceed standards with costs > \$25,000 within the project area."

Edit the following text:

"Create stewardship opportunities and/or partner with build on existing organizations to encourage residents to participate in activities such as stream teams , storm drain stenciling, volunteer monitoring, riparian plantings and education activities."

Add public officials and policy makers to the targeted audiences and clarify the areas of understanding.

Edit the following text:

"Education and outreach efforts shall be prioritized to target the following audiences and subject areas as appropriate"

Edit the following text:

BMPs for Dumpster maintenance for property owners. Move to S5.C.10.c.ii

Edit the following text:

"No later than February 2, 2015, Each Permittee shall begin measuring the understanding and adoption of the targeted behaviors for at least one new targeted audience in at least one new priority subject area. No later than February 2, 2016 the resulting measurements shall be used to direct education and outreach resources most effectively as well as to evaluate changes in adoption of the targeted behaviors. Permittees may meet this requirement individually or as a member of a regional group."

## EARLY INPUT SUGGESTED FORMAT

Name: **Colleen Diessner**

Agency/Org: **King County**

Issue 1: Description of issue with permit language (specify which permit, e.g. PH I or PH II):

**(These issues apply to PH I and PH II, though resolving these issues could be tailored to each permit separately.)**

**Definition of Terms (applicable to terms as they appear in Mapping and Documentation only):**

### **'Known Stormwater Inventory'**

**From 2018 forward: All stormwater infrastructure a jurisdiction has permitted and/or owns and/or operates and/or maintains. Inventory permitted before 2018 held under pervious permit requirement.**

### **'Maintain'**

**From 2018 forward: Permittees have one year from completion of construction to document new change in mapping inventory (private and unpermitted changes not included).**

### **'Tributary Conveyance'**

**Definition already exists; replace term with 'Stormwater Tributary Conveyance' to avoid confusion with natural system often associated with the term.**

### **'Basin'**

**Either clarify term as defined by USGS Watershed Boundary Dataset (WBD) or restate term as 'stormwater basin' and clarify what this term includes.**

### **'Subbasin'**

**Either clarify term as defined by USGS Watershed Boundary Dataset (WBD) or restate term as 'stormwater subbasin' and clarify what this term includes.**

### **'TMDL Area'**

**Clarify term as defined by the USGS Watershed Boundary Dataset (WBD) referenced on the Washington Department of Ecology GIS Data page, or another specified delineation.**

Proposed Solution/Recommendation:

**Define terms.**

Justification/Rationale for proposed change:

**Clarity of terms eliminates confusion and appropriately prepares permittees for Ecology's expectations during the auditing process. Shared interpretation of terms among permittees improves communication and data sharing capabilities, which would prove useful for spill control and regional analyses. To accommodate permittees who prefer flexible interpretations of terms 'known stormwater inventory' and 'maintain', proposed definitions have been adjusted to allow for previous interpretations to stand, while also encouraging jurisdictions to enhance data management processes for tracking inventory moving forward from the 2018 reissuance.**

Issue 2: Description of issue with permit language:

**County mapping expectations currently exclude rural areas.**

Proposed Solution/Recommendation:

**County mapping efforts could extend to include rural areas.**

Justification/Rationale for proposed change:

**Need for complete mapping of all stormwater inventory. Given that the purpose of stormwater mapping is to know and understand our infrastructure for the sake of pollution control and water resource management, the goal must be to map the entire system. Mapping the complete system is vital to spill control efforts, regional flow analysis, pollution screening, and any environmental science studies reliant on flow analysis.**

Issue 3: Description of issue:

**Need for creating a regional or statewide stormwater infrastructure map.**

Proposed Solution/Recommendation:

**Begin deliberation process for the creation of a regional or statewide stormwater infrastructure map.**

Justification/Rationale for proposed change:

**Regional flow maps are necessary for spill control, pollution monitoring and screening, for flow analyses and myriad other environmental research applications. Just as we need regional stream maps to locate and study water resources, we need stormwater maps to understand and track our interconnected system. Water doesn't start and end within jurisdictional boundaries; water flows, permeates, evaporates, and contaminates. Considering that the overarching goal of the NPDES permit is protecting clean water sources, locating and monitoring stormwater through mapping is imperative.**

Submit your input to [SWPermitComments@ecy.wa.gov](mailto:SWPermitComments@ecy.wa.gov) by 9.30.16

## CONTACT

Questions? Contact Abbey Stockwell at [abbey.stockwell@ecy.wa.gov](mailto:abbey.stockwell@ecy.wa.gov) or 360.407-7221



**City of Seattle**  
Seattle Public Utilities

September 30, 2016

Stormwater Permit Comments  
Abbey Stockwell  
Washington State Department of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600

[SWPermitComments@ecy.wa.gov](mailto:SWPermitComments@ecy.wa.gov)

Re: City of Seattle's Pre-draft Input on 2018 Phase I Municipal Stormwater Permit Reissuance

Dear Ms. Stockwell;

The City of Seattle is providing the following pre-draft input for the reissuance of the 2018 Phase I Municipal Stormwater Permit. The attachment to this letter includes our suggested edits to incorporate into the pre-draft permit. Thank you for soliciting input to develop effective permit requirements to protect our environment. We hope that these comments will be useful in the development of the draft permit.

If you have any questions or require further information, please contact Kate Rhoads, ([kate.rhoads@seattle.gov](mailto:kate.rhoads@seattle.gov) or 206-684-8298). Seattle looks forward to continuing to work with you.

Cordially,

Madeline Fong-Goddard, PE  
Deputy Director  
Drainage & Wastewater Line of Business  
Seattle Public Utilities



## EARLY INPUT ON PHASE I MUNICIPAL STORMWATER PERMIT

1. Name: Kate Rhoads

Agency/Org: City of Seattle/Seattle Public Utilities

Issue: S8.B, Phase I Permit

Proposed Solution/Recommendation: Add a Lower Duwamish Waterway focus to Status and Trends Monitoring.

Justification/Rationale for proposed change: Seattle strongly recommends that some of the status and trends funding be focused on the Lower Duwamish Waterway. Collectively, we (EPA, Ecology, City of Seattle, King County, Port of Seattle, Tukwila, Boeing and other private businesses) will spend an estimated \$600,000,000 on cleaning up the Duwamish. This price does not include the millions that will be spent by municipalities and businesses on source control and stormwater treatment. Much of this funding comes from federal and state tax payers and municipal rate payers. While all waterbodies are important, Seattle feels that as a region it is imperative that we use some of our collective monitoring effort to ensure that our tax and rate payer dollars are going towards understanding how the Duwamish, and ultimately Puget Sound, respond to pollution prevention and cleanup efforts. Seattle asked representatives of the Stormwater Workgroup to include this recommendation in the letter the Stormwater Work Group sent in to Ecology on June 3, 2016, however this recommendation was not included.

2. Name: Kate Rhoads

Agency/Org: City of Seattle/Seattle Public Utilities

Issue: S8.C, Phase I Permit

Proposed Solution/Recommendation: Reduce the level of funding from permittees to the collective fund to implement RSMP effectiveness studies.

Justification/Rationale for proposed change: Funding for program effectiveness studies should better reflect the needs of permittees and ability of Ecology to administer the program. During the 2013 permit, Ecology and the volunteer permittees were unable to identify and administer enough projects to use all of the available funding resulting in \$1,300,000 remaining unspent. Seattle recommends that in the 2018 permit, the collective funding be reduced by 25 percent to reflect a funding level that can be supported and implemented by Ecology in the role of project manager and contracting agent. This level of funding will support new effectiveness studies and the on-going effectiveness studies work by Redmond and King County that will continue into the next permit.

## 2018 WWA Municipal Stormwater Permit Reissuance

In addition, any remaining funds at the end of the permit term should be returned to the jurisdictions. Jurisdictions costs around stormwater management are increasing, so to have hundreds of thousands of dollars tied up in this program is wasteful. The future of state funds for grants from Ecology is uncertain given the current MTCA funding gap and other pressures on the state budget. As a group we should figure out the right amount to fund the RSMP so that there is a balance between supporting regional efforts and local permit implementation.

3. Name: Kate Rhoads

Agency/Org: City of Seattle/Seattle Public Utilities

Issue: S8.D, Phase I Permit

Proposed Solution/Recommendation: Combine this permit monitoring requirement with the S8.C monitoring requirement. Eliminate the payment for this requirement.

Justification/Rationale for proposed change: The City of Seattle does not support the continuation of funding for the implementation of the RSMP Source Identification Repository (SIDIR). Funding for this should be eliminated for the next permit. As currently scoped, SIDIR is an effectiveness study that is focused on identifying regional solutions to common illicit discharges and pollution problems. In fact, the project being conducted under SIDIR was selected and funded as part of the S8.C Effectiveness Monitoring of Stormwater Management Program Activities.

As stated before, Seattle recommends that the current level of funding being provided by permittees to Ecology for implementation of S8.C be reduced in the 2018 permit. Because of this, there is no need to move the funding for S8.D to S8.C.

4. Name: Kate Rhoads

Agency/Org: City of Seattle/Seattle Public Utilities

Issue: Reviewing the Stormwater Manual for Western Washington and the NPDES Permit at the same time is too cumbersome.

Proposed Solution/Recommendation: Perform a public review period for the Stormwater Manual prior to the public review period for the NPDES Permit. This will allow changes to be made in the Manual prior to the permit review and will be more efficient by avoiding the problems encountered with the simultaneous reviews.

5. Name: Kate Rhoads

Agency/Org: City of Seattle/Seattle Public Utilities

Issue: Appendix 1; Not all artificial turf fields are created equal

Proposed Solution/Recommendation: Allow organic fill (e.g. cork, coconut husks, sand) fields to be considered non-pollution-generating surfaces. Those fields with petroleum-based crumb rubber would still be considered pollution-generating surfaces and trigger water-quality treatment. Proposed permit revision Section 2 of Appendix 1:

***Pollution-generating pervious surfaces (PGPS)*** – Any non-impervious surface subject to vehicular use, industrial activities (as further defined in the glossary of the *Stormwater Management Manual for Western Washington (SWMMWW)*); or storage of erodible or leachable materials, wastes, or chemicals, and that receive direct rainfall or run-on or blow-in of rainfall, use of pesticides and fertilizers, or loss of soil. Typical PGPS include permeable pavement subject to vehicular use, lawns, and landscaped areas including: golf courses, parks, cemeteries, and sports fields (natural and artificial turf with petroleum-based crumb rubber).

6. Name: Kate Rhoads

Agency/Org: City of Seattle/Seattle Public Utilities

Issue: MR#5 Performance Standard for match an existing condition, if allowed, is incorrect due to a technical anomaly.

Proposed Solution/Recommendation: Revise Appendix 1 MR#5 LID performance standard to address a technical modeling anomaly associated with projects allowed to match existing condition. See the previously drafted document developed - "Attachment 1 to Enclosure 3 - Ecology's LID Existing Condition Performance Standard" dated 4/23/14 (attached).

- *Basins with less than 40% TIA before 1985: match forested flow discharge duration rates from 8% of the 2-year recurrence interval flow to 50% of the 2-year recurrence interval flow*
- *All other basins: match existing (currently developed) flow discharge duration rates between the 1 percent and 10 percent exceedance values ~~from 8% of the 2-year recurrence interval flow to 50% of the 2-year recurrence interval flow~~*

7. Name: Kate Rhoads

Agency/Org: City of Seattle/Seattle Public Utilities

Issue: Consider adding trees (retained and new) to the MR#5 List Approaches.

Proposed Solution/Recommendation: Due to the quantifiable stormwater benefits of trees, Seattle suggests that tree planting be a requirement of both Mandatory Lists #1 & #2 in Appendix 1.

*“Lawn and landscape areas:*

- *Post-Construction Soil Quality and Depth in accordance with BMP T5.13 in Chapter 5 of Volume V, of the Stormwater Management Manual for Western Washington (SMWW2) at all projects.*
- *Provide a minimum of one tree for every 1,000 sf of lawn and landscape area. Trees shall be planted in accordance with Section 7.7.3 of Appendix III-C of Volume III.”*

8. Name: Kate Rhoads

Agency/Org: City of Seattle/Seattle Public Utilities

Issue: Depending on project specifics, maintenance capabilities, funding, programming requirements and other factors, an applicant should have the choice to use either permeable pavement or rain gardens/bioretention cells, whichever is considered feasible. Rain gardens and bioretention cells pose fewer maintenance challenges than permeable pavement and might prove to be more reliable in performance over the long term. In addition, maintenance of permeable pavement requires the use of expensive equipment that is not typically available to the average resident or small business.

Proposed Solution/Recommendation: Therefore, Seattle requests the following change to allow applicants flexibility in choosing between permeable pavement and rain garden/ bioretention BMPs:

*“Mandatory List #2, Other Hard Surfaces:*

*2. Applicant must choose one that is considered feasible:*

*a. Permeable pavement in accordance with BMP T5.15 in Chapter 5 of Volume V of the SMMWW, or*

*b. Bioretention (See Chapter 7, Volume V of the SMMWW) facilities that have a minimum horizontally projected surface area below the overflow which is at least 5% of the total surface area draining to it.*

9. Name: Kate Rhoads

Agency/Org: City of Seattle/Seattle Public Utilities

Issue: Minimum native (a.k.a. initial) soil hydraulic conductivity infiltration rate for **rain gardens** should be 0.6 in/hr instead of 0.3 in/hr.

Proposed Solution/Recommendation: Revise feasibility criteria for minimum measured soil hydraulic conductivity infiltration rate to 0.6 in/hr for rain gardens.

Justification/Rationale for proposed change: Rain gardens are considered non-engineered BMPs and Ecology does not recommend the use of underdrains for rain gardens. Therefore, based on Seattle's professional opinion, a minimum infiltration rate of 0.3 in/hr is too low for rain gardens. Native soils that infiltrate at 0.3 in/hr with a simple infiltration test can indicate poor draining soil conditions which can result in failure of the facility, especially for those raingardens with greater ponding depth and larger contributing areas. Changing the minimum native soil hydraulic conductivity rate for raingardens to 0.6 in/hr will prevent raingardens from being built in poorly draining soils and will reduce the number of raingardens that fail.

10. Name: Kate Rhoads

Agency/Org: City of Seattle/Seattle Public Utilities

Issue: S5.C.5, Phase I Permit

Proposed Solution/Recommendation: Do not significantly change the requirements for controlling runoff from new development, redevelopment, or construction sites.

Justification/Rationale for proposed change: The City of Seattle does not think that additional changes are needed for controlling runoff from new development, redevelopment, or construction sites. Significant changes were made for the current permit and time is needed to evaluate the effectiveness of current code requirements before making changes. An exception to this is to incorporate into the permit the LID-related alternatives that Seattle provided during the equivalency review, comments #6 and #8.

## Attachment 1 to Enclosure 3 Ecology's LID Existing Condition Performance Standard

This Attachment provides a technical comparison and analysis between the current expression of Ecology's LID existing condition standard (see definition below) and the expression of that standard which Seattle understands Ecology is considering. This information supports Enclosure 3, section 2.1. Based on technical findings completed by the City of Seattle comparing the two expressions and their application within the City, Seattle supports Ecology modifying language for the Ecology LID performance standard.

### 1. Ecology's LID Performance Standard Modifications

This subsection discusses proposed modification to the current Ecology LID existing conditions performance standard.

#### Ecology's Current LID Performance Standard as expressed in the MS4 Permit

Under MR #5 of the 2013-2018 Phase I Municipal Stormwater Discharge Permit (Permit), the Ecology LID performance standard requires that stormwater discharges from development sites match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 8% of the 2-year recurrence interval flow to 50% of the 2-year recurrence interval flow. The "pre-developed" condition to be matched is a forested land cover condition, unless the drainage area of the subbasin and all subsequent downstream basins have had at least 40 percent total impervious area since 1985. For areas identified by Ecology as developed to 40% before 1985, which Seattle termed "non-listed creek basins", the pre-developed condition to be matched is the existing land cover condition; additional information is stated in Appendix 1 to the Permit. For ease of reference, this Enclosure assigns the general term "**LID existing condition standard**" to the standard as currently expressed by Ecology.

Much of Seattle currently meets the criteria of having development equal to or greater than 40% TIA before 1985; current GIS data indicates that an existing condition performance standard would apply in about 49% of the MS4 area within the City limits.

To summarize, the current Ecology LID performance standard as defined in the MS4 Permit is as follows:

- Basins with less than 40% TIA before 1985 (Listed Creek Basins): match forested flow discharge duration rates from 8% of the 2-year recurrence interval flow to 50% of the 2-year recurrence interval flow
- All other basins (non-listed creek basins): match existing (currently developed) flow discharge duration rates from 8% of the 2-year recurrence interval flow to 50% of the 2-year recurrence interval flow

#### Ecology's LID Performance Standard for "Existing Condition" as applied in Seattle

Seattle and Ecology have discovered a technical anomaly regarding the expression of "existing condition" by Ecology in the Permit. Recent discussions with Ecology suggest that Ecology is considering a different way of expressing the LID performance standard for existing condition. Ecology's language makes it clear that when development or redevelopment occurs in areas that Ecology has mapped as having been intensely developed before 1985, the projects must match existing run off conditions. However, modeling indicates that Ecology's expression of its LID existing condition standard has unintended consequences. (This technical anomaly does not affect Ecology's LID performance standard to match the pre-developed forested condition.)

## Attachment 1 to Enclosure 3 Ecology's LID Existing Condition Performance Standard

Because of this technical anomaly, it is necessary to modify the expression of LID existing condition in order to implement the intent of the performance standard. Seattle understands the following to be Ecology's intent, which was confirmed in discussions with Ed O'Brien at Ecology:

- Projects match existing (currently developed) flow discharge durations between the 1% and 10% exceedance values as opposed to 8% of the 2-year to 50% of the 2-year.

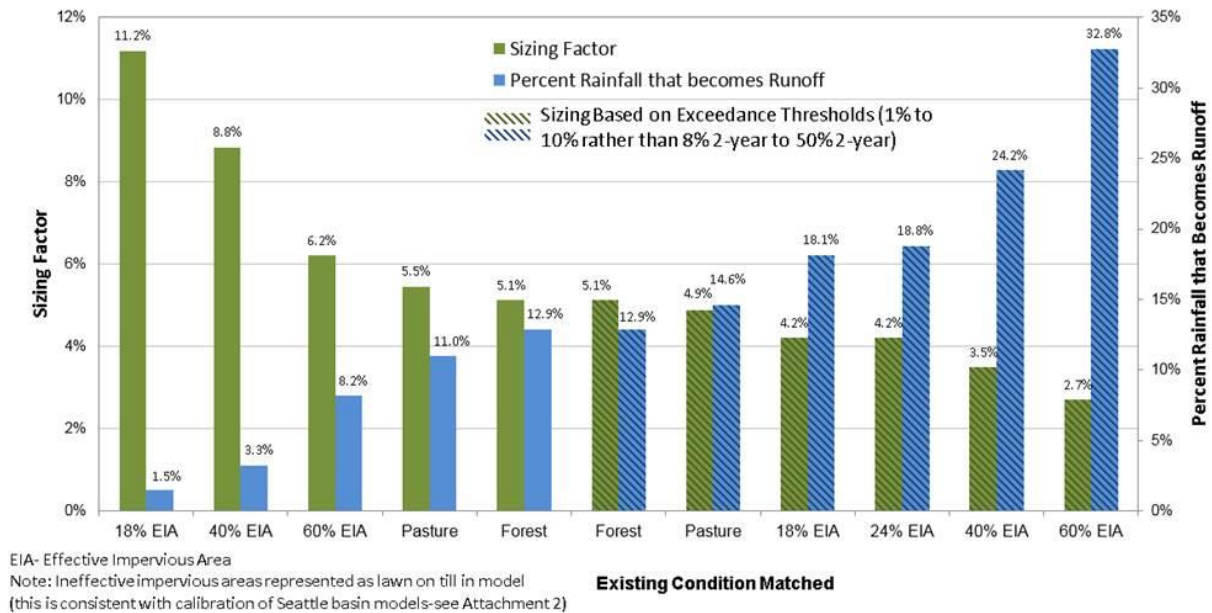
### **2. Comparison of Current Ecology Existing Condition LID Performance Standard with A Modified Performance Standard**

This sub-section demonstrates modeling output that compares (1) the existing condition standard as expressed by matching flow durations at defined flood frequency recurrence intervals (current Ecology expression) to (2) that expressed by matching flow exceedance (modified Ecology expression). This comparison is evaluated for varying degrees of development (as represented by impervious area), forested land cover, and pasture land cover. This effort demonstrates the technical anomaly and how existing condition can be expressed to match the intended outcomes of the Ecology LID performance standard.

Figure 1 shows an evaluation of the existing condition standard based on (1) matching recurrence intervals (matching discharge rates from 8% of the 2-year recurrence interval flow to 50% of the 2-year recurrence interval flow; unhatched bars) and (2) matching exceedance period (matching existing flow durations for between the 1% and 10% exceedance values; hatched bars) for various developed conditions. This comparison demonstrates the required size of GSI facilities and annual runoff volume that met each standard. The use of the 1% and 10% exceedance range was used by Seattle based on discussions at Ecology's Low Impact Development (LID) Technical Advisory Committee (seven meetings convened by Ecology over 2009 and 2010)).

Figure 1 shows the variation in required stormwater management facility size (shown as sizing factors) for managing runoff from a site with using a bioretention system, in relation to the annual runoff volume (shown as percent rainfall that become runoff). The runoff modeling applied the various x-axis existing conditions for 100% new and replaced impervious surfaces to meet the Ecology LID Existing Conditions Standard. The modeling addressed a range of pre-developed conditions (i.e., 18, 40, and 60 percent impervious coverage; see unhatched bars in Figure 1) to gain an understanding of outcomes (performance) when the standard based on both matching recurrence interval and matching flow exceedance range are applied.

## Attachment 1 to Enclosure 3 Ecology's LID Existing Condition Performance Standard



**Figure 1. Size and Performance of Bioretention Cell Sized to Meet Various Existing Conditions<sup>1</sup>**

When the standard, based on matching recurrence interval, is applied to meet an existing developed condition (i.e., mix of impervious and pervious land cover as represented by “lawn”) the results for all the project site coverage scenarios are larger than infiltration facilities sized to meet a pre-developed forested condition. These results seem incongruous with the aim of the LID requirements. It is Seattle’s understanding that the intent of allowing highly developed areas to match an existing condition follows the assumption that the creeks in these watersheds have had time to stabilize based on the existing condition. It would follow that the degree of mitigation required to prevent further degradation to the creek system would be less than would be required to restore the hydrologic regime to a pre-developed, forested condition. Thus, it would be expected that the infiltration facility sized to match an existing condition (comprised of a presumed mix of impervious area and lawn surface) would be smaller than that required to match the target runoff condition from a forest condition. This is not the result, however, due to the nature of the flow duration-based standard.

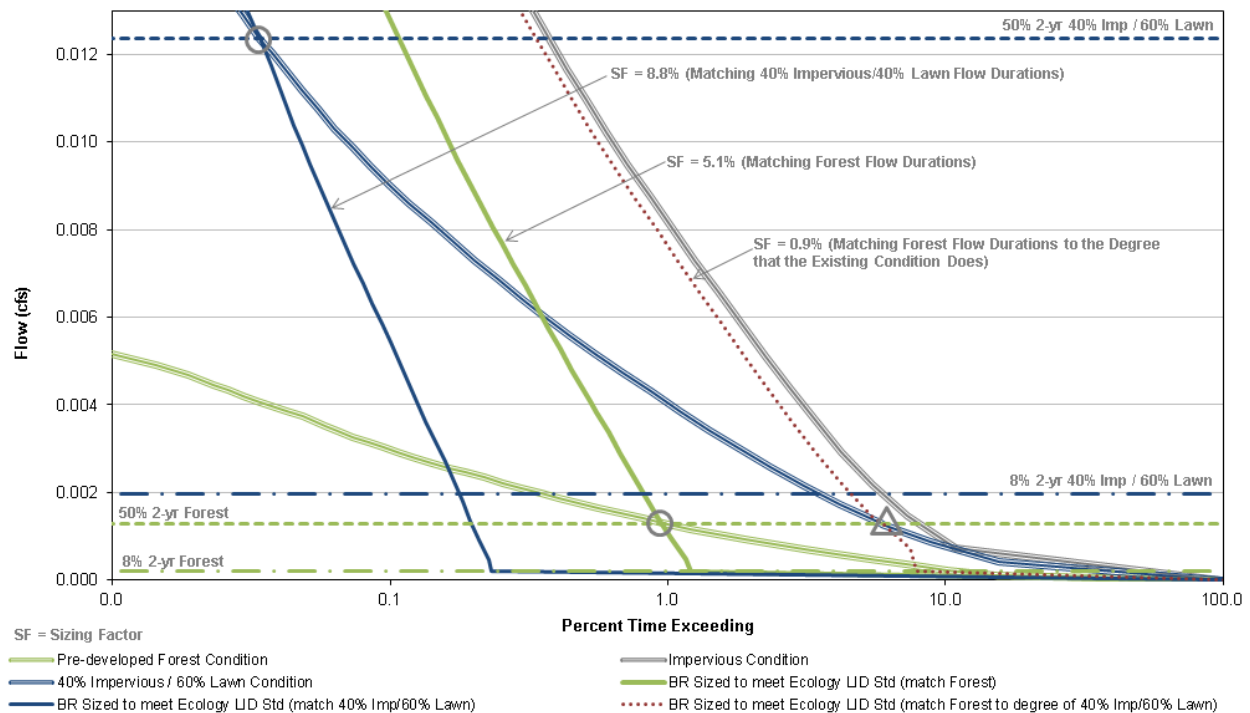
To understand the results, the duration plots must be considered. Figure 2 shows duration plots for bioretention cells sized to match a pre-developed forest condition (green line) and an existing 40 percent impervious / 60 percent lawn condition (blue line). The flow ranges for which the durations must be matched are delineated by dashed horizontal lines (i.e., demarcating 8% of the 2-year flow rate and 50% of the 2-year flow rate). The duration target that controls sizing for infiltration facilities is 50% of the 2-year flow rate (i.e., an infiltrating facility that matches the 50% of the 2-year flow rate target will also meet the 8% of the 2-year target). The points at which the mitigated flow duration and controlling duration target (i.e., 50%

<sup>1</sup> Bioretention sizing assumes vertical facility side walls, 6 inches of ponding, 18 inches of bioretention soil mix, native soil design infiltration rate of 0.25 inches per hour, and underlying till soils. Ineffective impervious areas represented as lawn on till in model (this is consistent with calibration of Seattle basin models-see Attachment 2)



## Attachment 1 to Enclosure 3 Ecology's LID Existing Condition Performance Standard

of the 2-year flow rate) intersect are circled. Even though the pre-developed forest condition has much less runoff than the 40 percent impervious / 60 percent lawn condition, the flow range for which the durations must be matched to meet Ecology's current expression of the LID existing condition standard is much broader and comprises larger flow rates. Matching flow durations at these higher flow rates would require a larger infiltration facility than a forested condition.



**Figure 2. Duration plot for bioretention cell sized to meet the Ecology LID performance standard**

It is unlikely that Ecology intended to require more mitigation for highly developed areas where the existing condition standard applies than for forested sites. It is our understanding based on conversations with Ecology that the intent of the LID existing conditions standard is to match a *forested* hydrologic condition as well as the existing condition does. One of the immediate conclusions from this exercise is that facilities sized to existing developed conditions (i.e., 18, 40, and 60 percent impervious coverage) with the intent of protecting receiving waters as well as the existing condition does is better represented by matching existing flow durations for the 1% and 10% exceedance values.

After spending a good portion of the past 15 years writing and updating stormwater manuals for Phase I and II permittees to be equivalent to the SWMMWW, it's become clear that there is room for Ecology's manual to be crafted in a way that is more clear and concise, and in particular more suitable for municipal implementation. As written, no municipality can truly adopt and implement the SWMMWW. As a result, many permittees either craft their own manual, or an addendum or supplement to the SWMMWW. This is an expensive process that shouldn't need to be repeated again and again for individual permittees. At this point there should be a cost-benefit analysis where we consider the savings that could be realized if the SWMMWW were written in a way that it could be more readily implemented essentially directly by multiple permittees. This would require a considerable overhaul of the SWMMWW, but would not affect any of the core technical content and intent. Rather, it would be much like writing any of the equivalent manuals that are out there. Keep the tech content, improve the clarity and org, add some content that is useful to municipalities, and lose some of the educational material.

- - -

**Craig Doberstein**  
CPD Solutions, LLC  
[craig@cpdsolns.com](mailto:craig@cpdsolns.com)  
206-290-7536



# Pierce County

## Public Works and Utilities

2702 South 42nd Street, Suite 201  
Tacoma, Washington 98409-7322  
piercecountywa.org/pwu

**Brian J. Ziegler, P.E.**  
Director

brian.ziegler@co.pierce.wa.us

March 17, 2016  
WP61310

Mr. Bill Moore  
Program Development Services Section Manager  
Water Quality Program  
Washington State Department of Ecology  
PO Box 47696  
Olympia, WA 98504-7696

Re: Pierce County Recommendations for Section 8 (Monitoring) of 2018 NPDES Municipal Phase 1 & Phase 2 Permits

Dear Bill:

This letter articulates Pierce County's recommendations for Section 8 (Monitoring) of the 2018 NPDES Municipal Stormwater Permits. As funder and implementer of these monitoring requirements since 2007, Pierce County affords direct and meaningful contributions to Puget Sound monitoring data and analysis.

### Overall Approach to Municipal Stormwater Monitoring

Pierce County commends the Department of Ecology for its decision in 2012 to move towards coordinated stormwater monitoring and away from site-specific sampling that dominated the 2007 NPDES Phase I Municipal Stormwater Permit. We supported that transition. In particular, we embraced the status and trends monitoring component because we believe that understanding the health and needs of our streams will give us the information we can use to improve our stormwater program service delivery.

We continue to believe the Regional Stormwater Monitoring Program (RSMP) offers great potential for advancing our region in the battle to reduce polluted runoff. But there are several decisions we believe Ecology needs to make for the next round of permits.

1. Self-monitoring. We believe jurisdictions should continue to have the option to conduct RSMP-related monitoring in their jurisdictions rather than having to pay into a pooled fund. This assures individual jurisdictions build internal capacity for managing based on science, and that individual jurisdictions get relevant local information.
2. No penalty for self-monitoring. We believe jurisdictions that self-monitor should clearly be part of the overall RSMP. The same parameters, lab requirements, QAPPs, timing, and information sharing should apply to all sampling efforts, irrespective of whether a jurisdiction self-monitors or pays in.
3. On-time performance and project completion. Pierce County is concerned about lack of products from the effectiveness component of the current program.



4. Eliminate SIDAR and reduce municipal fees or redirect funds to other aspects of Section 8.
5. Refund unencumbered permittee payments. The possibility exists that a substantial amount of unencumbered funds, particularly under the effectiveness pay-in program may exist at the end of the current permit term. If this occurs, Pierce County requests Ecology refund permittees at the percent of their original pay-in obligation. The effectiveness studies were intended and linked to the current permit and thus should be refunded when the permit expires. Alternatively, unencumbered monitoring funds expected to carry over past 2018 could be “credited” back to permittees against 2018 permit monetary obligations.
6. Establish fiscal obligations for non-permittees, or reduce the scope and scale of the Stormwater Workgroup. While the Regional Stormwater Monitoring Program initially sought to integrate monitoring and funding from state and federal agencies, tribes, industry and agriculture, none of that has happened. Pierce County believes these commitments should be lived up to or the Stormwater Workgroup be reconstructed to represent members who make measurable commitments only.

The following provides additional detail on these points:

### **Status and Trends Monitoring**

We support continued implementation of the status and trends monitoring portion of the Regional Stormwater Monitoring Program (RSMP). We support the Stormwater Work Group’s 2010 recommendations to leverage local municipalities to conduct or finance the monitoring through the Municipal NPDES permits. We also encourage a continued effort to bring more interested parties aside from municipalities into the RSMP or a reconstruction of the Stormwater Work Group for the purpose of permit-holder, permit-manager interactions.

Regarding RSMP implementation, we support options to pay in or to self-monitor in lieu of paying in based on an individual jurisdiction’s choice. As you know, Pierce County was one of the few jurisdictions to choose Section 8.B.b, Option #2 – self monitoring in the 2013 NPDES Phase 1 Municipal Permit, instead of Option #1, paying in to a pooled fund to have the monitoring conducted by another entity. It is our perception that Ecology did not anticipate any jurisdictions choosing Option #2, possibly because of some local permittees who just “wanted to write a check” to Ecology. As a result, implementation did not go smoothly. Since Option #2 in the permit references implementation of the Regional Stormwater Monitoring Programs (RSMP) Quality Assurance Project Plans (QAPPs), it infers that entities who chose Option #2 are active participants in the RSMP. However, we experienced an effort by Ecology and the Pooled Resources Oversight Committee (PROC), who were formed to oversee Option #1 funds, to segregate and de-emphasize Pierce County’s Option 2 monitoring role in the RSMP. Option #2 participants followed similar but separate protocols, were discouraged from providing input at PROC meeting; and are not even mentioned on Ecology’s RSMP web page. Entities who chose Option #2 were repeatedly referenced as “opt-outs” instead of “Option 2’s.”

An additional issue was the misperception among some RSMP members that Option #2 meant participants were monitoring at sites within their jurisdictions that they had chosen. Option #2 participants were not allowed to monitor locally-selected sites, but worked off of the list of randomly selected sites created for the overall status and trends study and used by the PROC.

Ecology needs to be clear that there is a viable option to paying into the pooled fund. Option #2 was onerous, and was clearly intended to deter municipalities from self-monitoring. Unfortunately, this

contradicts and diminishes the Stormwater Work Group's efforts to increase voluntary participation in the RSMP effort.

Jurisdictions who did not choose Option #1 have a specific interest in utilizing our own trained staff and collecting information pertinent to our jurisdictions. Jurisdictions that choose to self-monitor should be allowed to do so. An underlying question is whether those who choose to self-monitor can be dovetailed into the RSMP effort, or if they should be required to conduct monitoring that is clearly different and unrelated to the RSMP.

One approach to encourage participation is to give municipalities who pay into the pooled fund first rights to monitor sites within their boundaries. For sites within the jurisdictional limits of a city or a county with monitoring expertise and resources, those cities and counties should be given first right of refusal to conduct monitoring within their jurisdiction, and be given contracting preference for that portion of the work. All data collected by these entities should be included in the RSMP database and used for regional analyses. These jurisdictions should work under the same project manager, QAPPs, timelines, etc. as the rest of the PROC.

Another approach is to have local jurisdictions who do not wish to pay into a pooled fund conduct supplemental monitoring of benefit to the RSMP. For example, Pierce County monitored for a number of contaminants of emerging concern such as personal care products, hormones, and steroids in sediment this permit cycle, which can be used to direct the next round of RSMP monitoring. Pierce County is also conducting marine bacteria monitoring, which is supplementing historic data being assembled by the PROC. The cost for this option should not exceed the cost of paying in to the pooled fund.

If there is truly an "opt-out" option, we recommend uncoupling it from the RSMP entirely. Many jurisdictions have voiced a desire to conduct monitoring at targeted sites that provides information pertinent to local stormwater management. Jurisdictions should be "credited" for independent monitoring that benefits their stormwater management program. These jurisdictions should not be required to pay, or should pay a significantly reduced amount, into the pooled resources fund. Data collected from targeted sites could provide an important comparison to data from the RSMP probabilistic sites as it relates to detecting stormwater impacts.

In addition, we recommend the following regarding the overall RSMP status and trends study design:

- Do not increase the cost or number of sites for status and trends sampling and analysis for the 2018 permit.
- Incorporate continuous flow monitoring into the study. Flow, and its impacts on sediment transport and the benthic community, is of growing concern in stormwater management. A reduction of the number of sites may be required to balance the incorporation of flow monitoring. SIDAR funds could be redirected to this task.
- Determine whether monitoring will continue at the same sites, rotating sites, or new sites each monitoring cycle. Establishing site access is costly and time-consuming. If long-term access is intended, it should be included in the site selection criteria.
- Amend site selection criteria to prevent sampling sites on the same creek within a short distance of each other. Under the status and trends – freshwater study, Pierce County had two streams each with two index stations. The 800 meter separation required under the study did not result in much difference in water quality or habitat.
- Give jurisdictions first rights of refusal to conduct the monitoring within their jurisdictions.



## **Effectiveness Monitoring Studies**

We support continued monitoring and analysis of the effectiveness of components of the NPDES Municipal Stormwater Permits to reduce the effects of polluted runoff. Specifically, we support effectiveness monitoring that evaluates how well the NPDES permit achieves or contributes to the goals of the Clean Water Act of "maximum extent practicable" and State Water Pollution Control Act of "all known, available and reasonable means of treatment" of polluted runoff.

Pierce County recommends the size of the effectiveness studies be frozen, if not reduced, relative to its proportion in the 2013 permits. The delays in project startups and the relatively modest project outputs to date may result in unencumbered funds at the end of the current permit term. We also recommend effectiveness studies linked to specific permit requirements within the term of the permit. We do not support funding effectiveness studies that outlast the permit by more than a reasonable timeframe. We do support continuation of the option for local jurisdictions to conduct independent effectiveness studies, but without the requirement that they also pay into the pooled fund.

We appreciate NPDES permittee participation in the effectiveness study selection process for those NPDES permittees who paid into the pooled fund. However, studies that significantly exceed the duration of the NPDES permit should be discouraged.

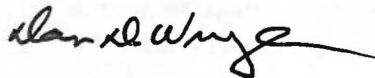
For the 2018 permits reissuance, allowances should be made for Permittees who conduct major cleanup programs involving intensive and sustained sampling, such as Commencement Bay and Duwamish River. These major monitoring programs should be considered to meet effectiveness monitoring requirements. These Permittees should not be required to conduct or pay in for additional effectiveness monitoring.

## **Source ID Monitoring Information Sharing**

We do not support continued funding of the Source identification Repository (SIDAR) component of the RSMP. This program has not proven useful. We support either reducing municipal fees or redirecting this portion of funding to the status and trends or effectiveness monitoring programs.

We hope these recommendations will assist Ecology in the development of the 2018 NPDES Municipal permit, and will improve regional stormwater management and monitoring. Please contact us if you have any questions.

Sincerely,



Dan Wrye  
Water Quality Manager  
Surface Water Management Division

DW:kj

C: File  
Carla Vincent, Water Quality Supervisor



## King County

### Water and Land Resources Division

Department of Natural Resources and Parks

King Street Center

201 South Jackson Street, Suite 600

Seattle, WA 98104-3855

**206-477-4800** Fax 206-296-0192

TTY Relay: 711

January 12, 2016

Bill Moore

Program Development Services Section Manager

Water Quality Program

Washington State Department of Ecology

PO Box 47696

Olympia, WA 98504-7696

RE: King County Water and Land Resources Division Recommendations for Improving the Regional Stormwater Monitoring Program

Dear Mr. Moore:

This letter articulates the King County Water Land and Resources (WLR) Division's recommendations for improving the Regional Stormwater Monitoring Program (RSMP) as part of the 2018 Phase I and Phase II Municipal Stormwater NPDES permit. We want to acknowledge the ongoing success of this program, and consider these comments to be minor adjustments. As a long-time supporter of the Stormwater Work Group, a significant funder of the RSMP, and a partner in implementing various aspects of the program, the WLR Division is pleased with the RSMP.

Our primary recommendation is to shift funding away from the Source Identification Information Repository (SIDIR) component of the RSMP into the development of a stream flow monitoring effort as part of the status and trends monitoring. The SIDIR program has not been the success that many had thought it would be, and the WLR Division recommends that this component of the RSMP be deprioritized and eliminated. This reprioritization of funds to stream flow monitoring would meet one of the objectives of the Stormwater Work Group's *2010 Stormwater Monitoring and Assessment Strategy for the Puget Sound Region* and subsequent recommendations, and also aligns with one of the primary objectives of stormwater management, which is proper stormflow management. We believe this evolution in permit conditions and the RSMP would take better advantage of local resources to achieve a more robust understanding of regional stormwater management. Our other recommendations include:

1. The WLR Division supports the continued implementation of status and trends monitoring at the same funding level established in the 2013 NPDES stormwater permits. The WLR Division does not support an increase in the number of sites, parameters, or cost associated with the sampling and analysis of status and trends water quality monitoring for the 2018 permit reissuance.
2. Skagit County and King County assisted in screening status and trends sampling locations and are assisting with the sample collection. The WLR Division believes that participation by local jurisdiction staff improves the RSMP, and recommends that a way be found to increase jurisdiction participation in the status and trends monitoring in the next permit cycle.
3. The WLR Division recognizes that several jurisdictions have opted to self-monitor as opposed to pay in to the regional collective fund for status and trends monitoring. We believe it is important to have a self-monitoring option and recommend that this be maintained in the next permit cycle. The WLR Division understands that the self-monitoring option will always have to meet certain minimum needs for successful monitoring programs and this drives the cost for individual jurisdictions. As a result, we recommend that the self-monitoring alternative continue to be more expensive than paying into a regional fund.
4. The WLR Division supports the continued implementation of effectiveness studies. However, we have a concern for the region's capacity to develop meaningful studies focused on permit effectiveness, manage those studies, and synthesize results in a way that can inform future permit implementation. We recommend that efforts be made to expand program capacity in the next permit cycle.
5. The monitoring conditions in the Phase I and Phase II municipal stormwater permits are funded by permitted jurisdictions for the advancement in achieving better water quality. There are many other stakeholders affected by the studies, including federal and state agencies, tribes, public interest groups, industries, and other NPDES stormwater permittees. Many of these organizations participate in the Stormwater Work Group, which directs the RSMP. We recommend that organizations participating in the Stormwater Work Group contribute to the pooled fund of the RSMP at a rate that is equivalent to the funding payments currently made by the permitted jurisdictions.



Bill Moore  
January 12, 2016  
Page 3

We feel these recommendations would aid in the evolution of building a regional stormwater monitoring program that is focused on measuring the success and effectiveness of the region's stormwater management actions while simultaneously planning for the future of stormwater management. We are looking forward to continuing this dialogue with Ecology.

Sincerely,

  
Mark Isaacson  
Division Director

  
John Taylor  
Assistant Division Director

cc: Curt Crawford, Manager, Stormwater Services Section, Water and Land Resources  
(WLR) Division, Department of Natural Resources and Parks (DNRP)  
Doug Navetski, Environmental Programs Managing Supervisor, Water Quality  
Compliance Unit (WQCU), WLR Division, DNRP  
Todd Hunsdorfer, Water Quality Program Manager III, WQCU, WLR Division, DNRP  
Jim Simmonds, Environmental Programs Managing Supervisor, Water Quality and  
Quantity Unit, WLR Division, DNRP



# KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS

614 DIVISION STREET (MS-26), PORT ORCHARD, WA 98366-4699 | KITSAP1: 360.337.5777 | KITSAPGOV.COM

FM: Kitsap County Public Works Stormwater Division

TO: Puget Sound Stormwater Workgroup

March 16, 2016

Thank you for the opportunity to provide comments about the Regional Stormwater Monitoring Program (RSMP) regarding changes and/or improvements to the current monitoring program. Kitsap County recognizes the hard work and time invested in developing and implementing a coordination regional approach for stormwater monitoring. We appreciate the efforts of Ecology staff in managing and implementing this program.

In 2010, the Stormwater Work Group (SWG) published the *Stormwater Monitoring and Assessment Strategy for the Puget Sound Region*. The stated purpose of this plan is to “bring together the collective capacity and resources of the region to provide a regional understanding of stormwater impacts and enable managers to know whether or not stormwater management actions are reducing harm caused to Puget Sound and the waters that feed it.” The SWG is nearing completion of the initial phase of implementing the program. The SWG and Ecology have requested comments for consideration to modify the program during the next NPDES Permit term.

Kitsap County has the following comments to the SWG and Ecology:

## **1. Solicit a Third Party Organization to Re-tool, Design, Implement and Issue Results**

We have always felt that answering the ultimate question of “how well are we doing in mitigating the impacts of stormwater on the Puget Sound ecosystem” is a complex scientific endeavor. Implementation of the program was initially placed in the hands of a multi-interest committee resulting in a program that has promise, but may not be the best approach going forward. It has always been our view that this would be best tackled by a consortium of scientists with a broad array of expertise similar to the Southern California Coastal Water Resource Program (SCCWRP). The SCCWRP “model” is a proven approach that could be adapted for the Puget Sound. The existing stable municipal permittee funding, along with potential National Estuary Program funding, creates an opportunity for competition to solicit third-party organizations that could manage and implement this type of a program. Integrating industrial permittees would further strengthen this approach, as would coordination with state (Ecology, DNR, & WDFW) and federal (EPA, USFWS, USGS, & NOAA-NMFS) agencies conducting related monitoring and research. A third party organization would provide a greater degree of objectivity for how to provide scientifically valid feedback for stormwater management actions, as well as feedback important for effectiveness, and source control programs



for adaptive management of resources, actions and permit requirements by those involved in the regulation and implementation of stormwater programs. It also has the advantage of separating the monitoring and regulatory functions that are both necessary for the overall success of the Puget Sound recovery effort. We understand that this is a bold departure from the current approach, but we believe it is well worth considering in light of the stakes involved, both economic and, more importantly, ecologically.

## **2. Reconsider the Probabilistic Site Selection Approach for Status and Trends Monitoring Program**

The current probabilistic approach may be appropriate for scientific studies that involve specific types of hypothesis testing where random selection is critical. However, the goals of this program seem to align more with a sub-group population study to tease out whether stormwater management actions are protective of water resources. This critical question focuses on developed and developing lands and excludes other land uses that are not part of this question. There are so many confounding variables, making study designs critical. There is also the question of what specific stormwater management actions are most effective (i.e. older vs. current SDM standards, LID/GSI, etc.) These issues and more point to the use of targeted, stratified, and paired-watershed avenues of inquiry. This is a complex research effort that really needs to be led by a strong science team that is probably beyond the capacity of the current SWG organization.

It is interesting to note that this type of approach was recommended by the expert scientific program reviewers hired in 2009. USGS (see NAQWA Program) as well as SW Washington, when seeking answers to similar questions, have selected a more targeted approach. Additionally, stratification of the target population, if done correctly, can result in more refined and focused studies with trends detected more quickly. Time is of the essence when determining trends related to stormwater management actions as well as providing scientific information for the adaptive management approach, so making a decision on shifting program emphasis should not be delayed

If the probabilistic approach is to be maintained, we alternatively recommend adding multiple effectiveness studies using an alternative approach. These studies could be smaller in scale and scope to the probabilistic study, with targeted sites, incorporate strong indicators related to stormwater (such as BIBI, small stream flow metrics, habitat, and selected water quality parameters), conduct a signal-to-noise ratio analysis of



# KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS

614 DIVISION STREET (MS-26), PORT ORCHARD, WA 98366-4699 | KITSAP1: 360.337.5777 | KITSAPGOV.COM

parameters, and utilize existing sites from local jurisdictions when possible. Piloting such a study in 2018 could inform the next permit cycle in regards to the feedback provided by the long-term status and trends probabilistic format vs. a targeted sites approach. Additionally, this approach has the advantage of potentially incorporating existing, long-term datasets to move the results forward more quickly and answer key questions related to stormwater management efficacy. In Kitsap County we were intrigued to learn, as a result of the recently completed King County BIBI project, that some developing basins showed stable or improving trends in BIBI scores. Following up on this would be invaluable as a retrospective study. The bottom line is that there may be more than one way to look at the problem and help answer our questions. We should explore these options, but unless there is a capable, dedicated coordinating organization, this will continue to be more happenstance than strategic.

### **3. Accept Credit for Existing Local Jurisdiction Programs**

If a decision is made to continue the current course, we would be supportive of the SWG and the RSMP, but we would also like to see some credit given for jurisdictions that have on-going complimentary monitoring programs. We recommend incorporating a mechanism for monetary credit for jurisdictions that collect monitoring data to inform their programs. The guidelines should be strict enough so meaningful studies resulting in program modifications or improvements are accepted. Such a credit system would encourage quality local studies by jurisdictions interested in answering critical questions and sharing the results. For example, Kitsap County is performing a multi-year study of infiltration rates of 10 permeable pavement installations, including video and ASTM infiltration rate testing. The results will be of interest to many others once complete, but intermediate results would provide information for adaptive management strategies for maintenance. Alternatively, if a targeted sites approach is performed as recommended in #2, those jurisdictions monitoring selected sites would be credited for contributing to the study. Kitsap County currently has a robust Watershed Health Monitoring Program that we believe would meet the rigor of scientific review.

Thank you for the opportunity to provide comments for improvements to the Regional Stormwater Monitoring Program.

Chris May

KCPW – Stormwater Division Director

[cmay@co.kitsap.wa.us](mailto:cmay@co.kitsap.wa.us)

360-337-7295



June 3, 2016

Bill Moore, Program Development Services Section Manager  
Water Quality Program  
Washington Department of Ecology  
P.O. Box 47696  
Olympia, WA 98504-7696

RE: Recommendations for Phase I and II NPDES Municipal Stormwater Permit Special Condition S8 Monitoring and Assessment (Permit Cycle 2018-2023)

Dear Mr. Moore:

The Stormwater Work Group (SWG) is pleased to submit to you the attached recommendations for permit Special Condition S8 Monitoring and Assessment. We have overall recommendations and specific recommendations for each subsection of S8. These recommendations were approved by complete consensus of the participating membership of the SWG. Only one of the recommendations has a minority concern which is included in the recommendation.

Where appropriate, we've also included specific implementation and adaptive management recommendations for clarity of intent or purpose behind the primary recommendation.

The portion of the Regional Stormwater Monitoring Program (RSMP) implemented via permit condition S8.B Status and Trends Monitoring applies only to permittees located in Puget Sound; the eight permittees located in the Lower Columbia River Basin are developing recommendations for receiving water status and trends monitoring in a separate process. The two remaining RSMP components (S8.C Effectiveness Studies and S8.D Source Identification and Diagnostic Monitoring) apply to all permittees in western Washington.

The SWG worked with Ecology to design, prioritize, implement, and oversee the RSMP since 2008. The RSMP is designed to provide adaptive management feedback as to the overall effectiveness of the municipal stormwater NPDES permits and local governments' stormwater management programs in Western Washington. The RSMP coordinates with the Puget Sound Partnership (PSP), Puget Sound Ecosystem Monitoring Program (PSEMP) and other regional recovery efforts; leverages state and federal monitoring programs; and is currently conducted by local, state, federal and private entities managed by the RSMP Coordinator.

The first permit cycle including this monitoring approach began in 2013. Since that time, the SWG has received regular reports from the RSMP Coordinator, heard findings from scientists conducting the work, and received important feedback from stakeholders and permittees, in particular, as to the successes, challenges, and impacts (positive or negative) of this transition to a regional, coordinated approach.





Overall, the SWG participating membership unanimously agreed that the Regional Stormwater Monitoring Program's (RSMP's) strategic, coordinated, and integrated approach to stormwater monitoring is a significant, positive evolution in municipal stormwater permit monitoring. Here are some key messages on each of the three components of the RSMP:

- **S8.B Status and Trends Monitoring** – The SWG is in complete consensus on the importance of maintaining the integrity of the regional status and trends monitoring program by providing a strong, but not exclusive, incentive for permittees to participate in the pay-in approach, Option 1. The SWG is also in complete consensus that coordination around the implementation of Option 2 needs improvement. There were varied and strongly-held opinions brought forward from the federal, state, and local caucuses as to what constitutes improved coordination; however, there is no clear consensus nor majority opinion on a specific approach. Therefore, several permittees and other stakeholders have, or will be submitting, their positions on this topic directly to Ecology via letter. Please consider each of those positions closely when deciding a path forward.

Results from the initial round of sampling and review of alternative sampling designs may result in changes to the RSMP status and trends monitoring approach. If these changes result in reduced funding needs for this RSMP activity, the permit requirements should reflect those reduced costs.

- **S8.C Effectiveness Studies** – The SWG is in complete consensus that this component be retained. In particular, the vast majority of the permittees participating in the Local Government Caucus feel that this component is the most useful and pertinent to Phase I and II Municipal Stormwater Permit management.
- **S8.D Source Identification and Diagnostic Monitoring** – The SWG is in complete consensus that allocation for this component be reduced, and the allocation offset be applied to S8.C Effectiveness Studies specifically to study source control effectiveness. The minority concern expressed by two Local Government Caucus representatives is that this reduction be substantial. The additional specificity provided is intended to clarify the purpose and utility of this RSMP component, something of great concern to the Local Government Caucus.

This is an exciting and challenging time for the SWG as we begin to apply lessons learned and utilize the RSMP's initial findings to adaptively manage the administration and implementation of the RSMP and further refine the SWG's purpose and role in guiding stormwater monitoring and management for Puget Sound.

In addition to continued oversight of the RSMP administration and implementation, the SWG is committed to the following key initiatives through 2017:

- Thoroughly assess and examine findings from the initial RSMP status and trends monitoring and effectiveness studies, as well as, alternative scientifically-credible monitoring and assessment approaches to refine and/or modify the RSMP as deemed necessary and appropriate
- Develop a new RSMP communication strategy through the Association of Washington Cities and Washington Association of Counties to more effectively share RSMP activities and findings, coordinate regional efforts, and garner additional participation and support



## STORMWATER WORK GROUP

<http://www.ecy.wa.gov/programs/wq/psmonitoring/swworkgroup.html>

- Discuss a strategy for expansion of the RSMP to other water bodies, types of NPDES-permitted activities, land uses, or geographic areas to move toward more complete coverage of all sources of stormwater and polluted runoff to Puget Sound
- Develop an implementation plan for agricultural runoff effectiveness monitoring
- Continue coordination with the PSP, PSEMP, and other regional recovery efforts
- Continue to provide recommendations, stakeholder feedback and lessons learned to Ecology and other regional partners on all aspects of stormwater monitoring, assessment and management

Lastly, the Pooled Resources Oversight Committee (PRO-C) is currently examining and evaluating Ecology's administrative performance. The SWG will provide this valuable feedback to Ecology this coming summer.

Thank you for the opportunity to provide these recommendations and share our vision for the continued evolution and improvement of the work group and regional stormwater monitoring and assessment. We appreciate Ecology's dedication of funding, critical staff support, and earnest administration of the RSMP.

Sincerely,

Cami A. Apfelbeck, Chair  
PSEMP Stormwater Work Group

cc: Sheida Sahandy, Executive Director, Puget Sound Partnership  
Scott Powell, Chair, PSEMP Steering Committee  
Karen Dinicola, SWG Project Manager  
Brandi Lubliner, RSMP Coordinator  
Stormwater Workgroup Representatives, Alternates, and other Interested Parties

Attachment





**Overall recommendations for RSMP funding and administration through the permits:**

1. Continue to use the SWG and its technical subgroups to set priorities for expenditure of RSMP funds and to modify program details such as parameter lists and site locations.
  - a. The SWG has ideas for focusing future monitoring priorities, but the RSMP findings are just beginning to come in and it is too early to make major changes to the RSMP.
2. Maintain the current formula for allocation of RSMP contributions in the current permit.
3. Require the cities who were new Phase II permittees for this current permit cycle to participate in S8 in the next permit and contribute to the RSMP at the same population-based proportional dollar amount as the other permittees.
4. Continue invoicing permittees in the spring of each year.
5. Continue to maintain funds for each of the RSMP components in separate accounts.
  - a. Pooled funds for S8.B Status and Trends Monitoring contributed by permittees located in Puget Sound should remain focused on Puget Sound status and trends monitoring activities.
6. Continue distributing and posting RSMP quarterly budget and progress reports.
7. Continue to use the Pooled Resources Oversight Committee (PRO-Committee) to oversee RSMP expenditures and contracting decisions.
8. Increase the percentage of total budget allocated for administering the RSMP from 5% to more fully reflect the actual costs, as recommended by the PRO-Committee. This increased amount will not exceed 7% of the total RSMP budget. The intent is to add additional staffing to reach a total of 1.25 FTE.

**Recommendations for the S8.B Status and Trends Monitoring:**

9. It is important to maintain the integrity of the regional status and trends monitoring program. This program needs to be fully funded to ensure that we can detect regional trends.
10. The permit needs to provide a strong, but not exclusive, incentive for permittees to participate in the pay-in approach as the primary means of funding the permit-driven regional status and trends monitoring program in Puget Sound receiving waters.
11. S8.B Status and Trends Monitoring "Option 2" for Puget Sound permittees needs to be better coordinated with the RSMP than what was done for the current permit.
  - a. "Option 2" needs to provide meaningful information to the RSMP.
12. Recommendations for future status and trends monitoring are expected in early 2017.
  - a. Review the existing status and trends data and strategy.
  - b. Evaluate alternative sampling designs and parameters that may be more efficient and provide information that is more specifically directed to stormwater management.
  - c. If strategic, scientifically credible changes are proposed for the approach to the status and trends monitoring that result in reduced funding needs for this RSMP activity, the permit requirements should reflect those reduced costs.
  - d. The study design for "Option 2" should reflect the recommendations for future RSMP status and trends monitoring.





### Recommendations for S8.C Effectiveness Studies:

13. The current permits' S8.C Effectiveness Studies alternatives should be continued in the next permit.

### Recommendations for S8.D Source Identification and Diagnostic Monitoring:

14. Ensure that permittees are required to enter IDDE information only one time in order to comply with permit requirements for real time spills and annual reporting.
15. Retain a reduced scope and budget for S8.D that is focused on using source identification and diagnostic monitoring data to move from anecdotes to data to set priorities on reducing sources of stormwater pollution, and to identify the best ways to solve (fix/reduce/eliminate) these problems.
  - a. Use the S8.D funds for ongoing analysis and reporting on sources of pollution, including changes over time in types of sources; geographic distribution; and frequency.
  - b. The amount of funding needed to do this in the next permit cycle should be determined through the analyses conducted during the remainder of this current permit cycle. In the next permit cycle, maintain only the minimum S8.D funding level needed to conduct the ongoing analyses.  
Minority concern: two local jurisdiction representatives want to ensure that this is a substantial reduction.
16. Move the remainder of the current S8.D funding allocation to S8.C for source control effectiveness studies.
  - a. Use the S8.D analysis/information to inform our source control effectiveness monitoring work.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10

1200 Sixth Avenue, Suite 900  
Seattle, WA 98101-3140

OFFICE OF THE REGIONAL  
ADMINISTRATOR

AUG 16 2016

Ms. Cami Apfelbeck, Chair  
Stormwater Work Group  
City of Bainbridge Island  
280 Madison Avenue  
Bainbridge Island, Washington 98110

Dear Ms. Apfelbeck and Representatives of the Stormwater Work Group:

I am writing to express our appreciation for all your group efforts in developing a coordinated and integrated approach to monitoring the stormwater problem in Puget Sound. Your work provides a scientific grounding as to the exact nature of the problem as well as advanced exploration into ways to reduce harm to the ecosystem.

The body of work generated by the Stormwater Work Group to date is impressive in terms of volume and quality. The recommendations for the National Pollutant Discharge Elimination System municipal stormwater permit Special Condition S8 were novel because of their integrated and inclusive nature, and because they resulted in a new paradigm for permit related monitoring. Your recommendations were wholly adopted by the Washington Department of Ecology to establish a comprehensive monitoring framework unlike any other in the nation.

Your early scientific contributions such as the Effectiveness Study Literature Review, Mussel Watch Gradient Project, and the U.S. Geological Survey Stream Gage Network Analysis advanced our regional understanding of stormwater science. The current Regional Stormwater Monitoring Program status and trends, effectiveness studies, and source identification monitoring and assessment projects continue to accelerate the pace of our improved understanding of stormwater impacts and management approaches. And your ever expanding role in developing monitoring recommendations for rural and agricultural lands indicates your commitment to a larger, integrated goal of reducing the harm caused by stormwater.

The Environmental Protection Agency Region 10 is encouraged by the past work of the Stormwater Work Group and we are hopeful that the Group's new recommendations will continue to move the program forward for permit cycles to come. We especially appreciate that the diverse representatives comprising this group do so voluntarily. The work you do is critical to the recovery of Puget Sound and your responsibility should not be underestimated. We look forward to future opportunities to support you and your work.

Sincerely,

A handwritten signature in blue ink, appearing to read "Dennis J. McLerran".

Dennis J. McLerran  
Regional Administrator

cc: Karen Dinicola, Stormwater Work Group Project Manager