



KITSAP COUNTY DEPARTMENT OF PUBLIC WORKS

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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



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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.

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