

Status Update to PRO-C

7/30/2015

From my perspective as the RSMP Coordinator all RSMP effectiveness studies must communicate well at multiple levels. QAPPs must present information for engineers, scientists, and stormwater managers on what BMP is being studied. Final project result need to be written for a varied and intelligent audience. I'm a little bit concerned that we haven't emphasized a communication element on most of these effectiveness studies to date.

King County BMP Retrofits – RSMP Effectiveness Studies

I've provided clear feedback that both the KC projects were too vague on BMP details in July 2014 memo and sent the same message again this spring on both draft QAPPs.

Echo Lake Hwy 99 BMP Retrofits

This project is only slightly delayed in schedule and only slightly overrunning costs (\$2,170 as of June 30, 2015). Deliverables to date approved by RSMP coordinator include draft and final QAPP, web posting, sampling progress report and semi-annual progress report.

The project's RSMP liaison is Fred Bergdolt with WSDOT. He and his stormwater monitoring team reviewed the draft QAPP and provided comments. The significant comments on the draft QAPP from the liaison, RSMP Coordinator, and ECY engineering were:

1. The draft QAPP was well written from a scientific standpoint but was lacking in terms of stormwater BMP engineering descriptions. The RSMP Coordinator and Ecology's engineers sent comments that the stormwater BMP and engineering descriptions were inadequate in the July 9, 2014 project proposal comments and on the draft QAPP comments (April 2015). We made it clear that the MUST clearly described the BMPs so that any other Permittee's engineering program knows exactly what BMP is built and being monitored. BMP drawings and design specs are needed.
 - a. As a result the project lead contacted the City of Shoreline engineers and learned that this project BMPs are enhanced treatment Filterra boxes, bioretention planter boxes (not rain gardens), and a stormwater detention system. There are no LID BMPs in this project. The bioretention planter boxes could have been LID if they weren't under drained, (but this makes them more monitoring-friendly).
 - b. The final QAPP does a better job identifying which monitoring is tied to individual BMP performance and when used for the combined system performance.
2. Clarity on hydrologic monitoring at the detention system is needed. There are un-sampled basins, and the draft QAPP was silent on the potential for bias.
3. There are many confounding factors in the plan to summarize effectiveness to Echo Lake. Stormwater from this project makes up only a small component of input to the lake.
4. Need for data validation and QC.

The final QAPP was submitted and both the liaison and RSMP Coordinator agreed that all comments were satisfactorily addressed and the final QAPP was approved in June 2014.

Regional stormwater retrofit in Federal Way to W Hylebos Creek

The draft QAPP was submitted to RSMP Coordinator and Federal Way colleagues on June 24th, 2015 (two months off schedule due to a failing bioretention element of the BMP retrofit). RSMP Coordinator and ECY engineering comments were returned in a 1-week turnaround so that the King County project manager had a month of review time to work on comments.

1. The draft was well written for most scientific monitoring aspects, but fell short in conveying how the retrofit is engineered to function. There is not nearly enough details were provided, site layout is confusing, and vague terminology for BMPs was used which leads to confusion. There was an Ecology grant to build the retrofit, so we have access to the pre-design report, which gives far more clarity than the QAPP. However it is out of date.
2. We still don't know how the ponds are built, or even if either pond has a true detention function. The word chosen for the draft QAPP is "wetpond" which may be inaccurate. More details are needed on the two ponds.
3. Descriptions of the bioretention facilities also need more details, drawings and/or design specs.

Overall message was this QAPP must convey clearly the engineering aspects of the BMPs so that other engineers know exactly what was built and what is being studied.

The RSMP liaison for this project is Will Appleton or Theresa Thurlow (Federal Way) and neither have provided comments on the draft QAPP yet.