WRIA 9 Stormwater Retrofit Project

Project Management Team Meeting, May 19, 2011

Meeting Notes

- Meeting began with review of First Stakeholder Workshop
    - Recommendation to convey the basics of the project's methods and priorities within WRIA 9, to communicate the application to local priorities
    - Local city representatives overheard concerns regarding methodology related to BMP types to be considered
        - Concern about balancing LID techniques with other BMPs, that only focusing on LID will not help municipalities to make progress towards other non-LID sections of their municipal stormwater permits
        - Question asked of Dr Horner if LID is the most effective means of controlling stormwater vs other traditional BMPs, and he responded affirmatively that research shows that LID is the most effective means
        - Jim reiterated that project if focusing on both controlling hydrology and pollutants, and to remember that flow control is an important element
            - If we control flow we will therefore also control pollutants being carried by the flowing stormwater
    - Question was put to the PMT for feedback on the idea of breaking the next workshop into two sections:
        - 1) local briefing and technical discussion of project tasks/progress with only WRIA 9 jurisdiction representatives
        - 2) more general project update and feedback session with larger general stakeholder audience
    - Discussion of elected official attendance at workshop and the issue of technical level of discussion at the workshops and the need to be able to update non-technical digressed from above question of workshop dichotomy into possible need for some type of project summary or exec summary
        - Suggestion to circulate prior to next workshop
        - Suggestion to anticipate questions of attendees, leading to FAQ type of handout presumably
        - Jim reminded PMT that originally workshops were to be technical in nature as they are the forum for discussion on project fulcrum issues which require participation and input while the WRIA 9 WEF briefings are intended to be "less technical" and targeted at updating electeds about project progress
        - Suggestion made to incorporate photos into the exec summary
        - Suggestion made to more thoroughly review the agenda at the start of the workshop to prevent confusion over progress of day's discussion

- Back to the discussion of workshop splitting – city representatives support in general particularly in need of technical discussions, however there is recognition of need for bigger picture discussion at larger scale
- Point is made that communicating the potential outputs of SUSTAIN is very important which Erkan agrees may require numerous re-runs of SUSTAIN which may also be a function of the scale of the indicator targets and selected BMPs
    - Erkan suggests that a sensitivity analysis of the number of model runs and time could be done

- Next agenda item is Dr Horner's indicator selection and target approach approval
    - No further discussion on the proposed indicators is needed and all of PMT unanimously agrees to approve the proposed flow and water quality indicators as chosen and final
    - Dr Horner leads discussion of hydrologic indicator target setting approach
        - Hydro targets are rooted in biological indicators
        - Important point: the targets may be a range, levels of improvement achieved, levels of protectiveness offered by various BMPs and costs,
            - These will range from no further degradation "hold the line" to fully restorative
        - Dr Horner will assess the adequacy of existing statistical analyses of the linkages of hydrologic targets to biological outcomes (the point of all this!)
        - Target setting will be done at regional level not on a per creek basis
        - Although attaining "fully restorative" or "fully forested" is impossible for many reasons, it is a useful exercise and scaling factor as it will give us context for the final outputs of project cost estimates
        - This dollar amount combined with the "hold the line" cost will be the bookends of the potential retrofitting costs
        - Suggestion is made to determine the volume of water needing to be "controlled" or held back as a tool for communicating/visualizing the scope of the "problem"
        - Discussion of targets moves to SUSTAIN model runs
            - How do we do model runs?
            - Do we place BMP location but not type and run to see what they SUSTAIN recommends?
            - Do we set which BMP types and # and run model?
            - Do we set the targets needing to be achieved and let SUSTAIN recommend BMP type, # and location?
        - We will run SUSTAIN with HSPF data for current conditions and "fully forested" and targets will fall somewhere in between
            - How do we set them?
            - 10% improvement in flow reduction?
            - Specific BIBI score? 35?

        - Discussion focuses on “fully forested” conditions definition: as HSPF is calibrated to current conditions, fully foresting the land with modern forest cover does not accurately model “pre-European contact” forest conditions of unlogged, old-growth, ent-like tree, forest conditions
        - HSPF also does not model original levels of in-stream woody debris, impacts associated with beaver dams
        - Better term for “fully forested” may be “best attainable conditions”
        - This discussion brings up question of the resolution of the outputs and thus the targets – which is why likely to be using a range of targets
    - Water Quality indicator target setting
        - As TSS is the indicator for water quality, and we have significant data for turbidity the first step is to establish relationship between TSS and turbidity
        - Jim reminded the group that we are not running modeling runs of dissolved metals
        - Dr. Horner will see if he is able to statistically correlate dissolved metals concentrations to TSS and flow so we can say qualitatively likelihood of reductions in metals conc. from reduction in flow and TSS
            - If this link does not work we will just set target for TSS and not make link to metals
        - Discussion of stream bank erosion vs runoff and solids concentrations in-stream
            - The TSS pollutograph in HSPF is calibrated to in-stream concentrations
                - In HSPF TSS concentrations are based on runoff of solids into streams and re-suspension of sediment in stream
            - SUSTAIN does are not model the re-suspension of sediment of in-stream
                - We will be capturing the reductions in concentrations of TSS in runoff brought about by projected flow reductions
                    - We are not modeling the effect of reduced flows on in-stream TSS concentrations
            - PMT is not too worried about this limitation
- Next agenda item is the BMP approach process lead by Curtis DeGasperi
    - At the next workshop (October) we need to present the stakeholders with an opportunity to provide feedback on the selection of BMPs which are to be modeled in SUSTAIN In order to get effective feedback from
    - So we are beginning a process to develop a team to come up with a proposal for the PMT to approve that will outline a proposed BMP selection approach
        - BMP team will assess approaches, BMP types, scale, compatibility with SUSTAIN, local suitability etc.

        - What BMP emphasis do we want to use? Such as infiltration, use of Road ROW, LID focus etc.
        - Covington suggests that we provide a BMP approach that will result in an output of %'s of types of BMPs needed to attain flow and WQ goals
            - They know their jurisdiction waters well enough to know potential locations for BMPs, but are lacking the science-backed assessment saying how much of what
            - Catchment or subbasin level
            - BMP Team suggestions/volunteers include following: Rich Horner (UW), Dino Marshalonis (EPA), Erkan Istanbulluoglu (UW), Olivia Wright (UW), Don Robinett (Seatac), Ben Parish (Covington), Curtis DeGasperi (KC), Dan Smith (KC), Doug Navetski (KC), Curt Crawford (KC), David Batts (KC)
- Next agenda item is update on ECY SUSTAIN project
    - Ed O'Brien reported for Mindy Roberts
    - Ecology has been conducting a three part toxics loading study, and now that they know some of the loadings amounts they want to study what to do about it
    - So ECY is planning to use SUSTAIN to model BMP effectiveness at reducing the loadings they have just determined
    - They will be studying two basins they have monitoring data for and will be modeling for about five metrics (hydrology and water quality) using the swim model and then SUSTAIN
    - Importantly the project will then analyze and likely update the parameters, cost information, and design criteria of the BMP database in SUSTAIN for the accuracy of their applicability to western Washington
        - To achieve this analysis ECY has contracted with Herrera consultants, and will put together a team of local BMP specialists to gather locally informed assessment of BMPs
            - Some members of our project team will be solicited to help on this effort to advise their project
        - They will assess adding up to two additional BMPs to the SUSTAIN database
        - Draft of updated BMP database should be completed by September 30, 2011
        - This project will share their updated BMP database with the WRIA 9 retrofit project for use in our modeling efforts
    - Comments/Questions on this should be directed to Mindy Roberts of ECY
- Next agenda item: Project Updates
    - Watershed modeling
        - Soos Creek model is up and running and calibrated for TSS data, not to 2007 land use data yet
        - Lots more to do, but making progress
    - SUSTAIN modeling

        - Having problems getting SUSTAIN to run, and at present time it continues to crash and is not running with our project data
            - ArcGIS is crashing
                - Common SUSTAIN problem associated with using wrong version of ArcGIS, but we are using correct version
            - Tetratech (SUSTAIN developer) is providing support to SUSTAIN team via email which is helping to fix problems step by step
        - Progress is being made however, as data formatting is finished for the time series data
        - EPA is getting through a series of updates from SUSTAIN developers on troubleshooting, and Dino Marshalonis (EPA) will be undergoing specific SUSTAIN training in coming weeks and will likely be able to help advise our SUTAIN team on problems
            - EPA understands that there is a need for SUSTAIN training and support as majority of jurisdictions currently using SUSTAIN are having problems with getting it to run
        - PMT members inquire as to the impacts of the SUSTAIN problems on the project's overall schedule and budget
            - At present, we are still on schedule and budget
            - Contingency planning is being considered if SUSTAIN problems continue,
                - King County modelers will begin to share task of running SUSTAIN with UW team and simultaneously run model
- Next Steps
    - PMT consensus selecting date of the next PMT meeting will be Thursday, September 22, 2011
    - PMT consensus selecting date of the next stakeholder workshop will be Thursday, October 20, 2011