

VOL III Technical Advisory Committee (TAC) Meeting Summary

December 8, 2008

12:00 – 2:00 P.M. Meeting

TAC Organization and Purpose

Approximately 40 people attended the TAC to discuss the role and tasks of the TAC and the timeframe of the Volume 3 update. The TAC is comprised of consultants chosen by Wright Water Engineers and MS4 representatives. The TAC will meet in smaller core subgroups to discuss and develop the technical content of Volume 3. This includes updates to existing content as well as new content and tools such as the BMP decision support system (DSS). TAC work products will be reviewed by the stakeholder committee. It is anticipated that the core groups will meet through much of 2009.

Meeting Summary

Please refer to the Volume 3 webpage for the agenda and handouts that were discussed at this meeting - http://www.udfcd.org/downloads/down_critmanual_update.htm

Source Volume Controls, Credits and DSS

There was extensive discussion about source volume controls, detention credits, BMP decision support system. The bullet point comments made by TAC members have been grouped by subcategory.

General Comments:

- Need to move away from EDBs being the primary practice and expand thinking.
- Explore all BMPs at all scales. Look at hierarchy (regional, neighborhood, local parks) to address needs.
- LID should be implemented to maximum extent practicable.
- Lack of incentive has been identified as a barrier to LID
- Assume all soils are bad and constructed soils are needed for stormwater BMPs that reduce runoff.
- Provide guidance in Vol 3 on testing for permeability and infiltration.
- Frame the LID discussion as it relates to BMPs managing at site level and providing ecosystem services.

Goals/Benefits:

- LID techniques can be used to meet regulatory requirement and add value to a site.
- LID depends on scale - Major volume/flood reduction – LID not appropriate. LID appropriate for small storms.
- There are studies showing that porous pavement can work well in cold climates.

Limitations:

- LID won't be a significant factor for most major drainage studies.
- Major volume/flood reduction – LID not appropriate
- LID is okay in some areas, but can be problematic in dense, urbanized areas. A broad set of tools needs to be considered based on site-specific conditions.
- Engineers should establish a realistic goal based on geotechnical conditions as early as practical. Geotechs are asked for a "permeability value" and this number can be off by a factor of ten or more.
- Irrigation and groundwater effects on LID long-term viability (e.g., high water table)

- Some areas should not promote infiltration (even with a liner) because of heave or instability potential.

Ultra urban sites:

- Important to talk about scale on ultra urban environments and maybe allow offsite BMPs for 100% lot development.
- Cash-in-lieu approaches could work and would need to be allowed under stormwater MS4 permits in order to be viable.

Credits and incentives:

- Detention credits are appropriate if engineering and design demonstrate that receiving waters will be protected (e.g., through volume reduction).
- Concern about offering credits and whether this will enable meeting water quality requirements.
- Provide incentives for densification and stopping sprawl.
- Current manual already has incentives built-in—don't reinvent the wheel.

Economics:

- Each developer looks at the return on investment. If LID costs developers more, then this hurts development in a city. LID needs to be promoted/used equally across the metro area.

Administrative aspects:

- LID can be used on small infill projects, but small, shallow, ponding areas on private property are difficult to track administratively to make sure structures remain and are maintained.

Additional comments relating to source volume controls:

- Explore benefits of preserving topsoil.
- Does active treatment (chemical addition) need to be explored?
- Is there opportunity for LID/LEED coordination?
- Drain time is very important parameter for sedimentation and water quality performance. Infiltration may occur within water quality basin and can affect drain time. Need to link drain time and infiltration in design of WQCV facilities.

Organization and Content of Volume 3

- Need a planner section because engineers are the last to see the site and planners should know more about what (space) engineers need for stormwater management.
- Need BMPs and a decision matrix separated out by development type, density.
- BMP design information should be practical, not theoretical.
- Priorities should include detailed construction, maintenance and design details (including good specs); and aggressive training and outreach like Cherry Creek Stewardship Partnership workshops.

The new integrated planning design—policy/planning elements will be general, emphasizing importance of early upfront planning and will avoid discussing specific planning processes that may create confusion or conflict with existing community planning processes. The proposed TOC provides more details on content reorganization. The most significant change of the existing content is the arrangement of BMP information. Chpt 3 will contain all BMPs and each BMP will have subsections that include:

- Description (general application (site size/land use density), advantages/disadvantages)
- Guidance for Credits and Combining with Other Structures
- Design Criteria and Details
- Installation Guidelines (construction phasing)
- Maintenance
- Design Examples (Include DESIGN FORMS)

It was recommended that the Maintenance section in the BMP chapter focus on “Designing for Maintenance” and a separate maintenance Chpt be retained to provide information about post construction BMP maintenance. Presenting maintenance information separately reflects the different audiences that are involved in the design and the post construction maintenance stages.

Other Discussion Items

Underground Detention/ Sandfilter:

- PLD on the surface combined with subsurface flood control
- Volume 3 should include Sand Filter Vault - Can be used with lot-line-to-lot-line developments.
- Include recommendations for energy dissipation in sand filter box, spreading out flows. Pumping guidance: what pump level should be used: 10-yr, 100-yr, nuisance rate? Duplexing? Backups?

“Volume 4”:

Urban drainage proposed that construction BMP chapter be pulled from Volume 3 and move to a new Volume 4 because the EPA may substantially change construction site BMP requirements. Some jurisdictions voiced concern because local ordinance refer to Volume 3 and removing construction BMPs from this volume could create a regulatory gap. Construction BMPs may be moved to an appendix within Volume 3 to avoid a regulatory gap.