CoC BMP Manual

Meeting 6 Minutes

May 15, 2pm-4pm

7th Floor Conference Room, 1136 Washington St.

Thank you to those who attended Wednesday's (5/15) meeting and contributed to the sixth monthly meeting to develop the City's BMP Design Manual. We wanted to provide you with an overview/minutes of the discussed best management practices Bioretention and Vegetated Filter Strips. Attached we have provided a pdf copy of the presentation, and plan to continue providing the presentations for the following monthly meetings (3 remaining).

For this meeting, Dave Briglio provided design information for Bioretention Cells and Vegetated Filter Strips. For both BMPs, Dave discussed their major design components, general feasibility, key considerations (i.e. design criteria, advantages/disadvantages, and maintenance requirements), schematics and design steps.

In bioretention cells, stormwater runoff collected in the upper layer of the system is filtered through the surface vegetation, mulch layer, pervious soil layer, and then stored temporarily in a stone aggregate base layer, before infiltrating into the underlying soils (or to an outlet through a perforated pipe underdrain). Use of bioretention on a site not only has the opportunity to treat the WQv, but it will also contribute to site runoff volume reduction (i.e. lowering the site's weighted CN value). For bioretention, a design example from the Georgia Stormwater Management Manual (GSMM) was reviewed and is attached in the presentation. Longevity of a bioretention area was discussed amongst the group. It was mentioned that owners tend to shy away from using bioretention because they believe 2-3 year life span of a bioretention area is too much. However, if designed correctly, especially with the use of proper pretreatment to remove coarse sediments from entering the cell, bioretention has the potential to being a self sustaining system.

Vegetated filter strips are uniformly graded and densely vegetated sections of land, engineered and designed to treat runoff and remove pollutants through vegetative filtering and infiltration. Filter strips rely on vegetation to slow runoff velocities and filter out sediment and other pollutants from urban stormwater. Hence, the filter strips are advantageous for treating WQv, but do not have significant reduction in runoff volume (infiltration of the full WQv most likely will not occur and therefore is not counted towards reducing the site's CN). Again, the attached powerpoint provides design steps to appropriately size a vegetated filter strip.

Closeout maintenance requirements for BMPs were brought up during the meeting. The City will follow permanent water quality maintenance agreements which will ultimately be the developer's responsibility, but it is up to the designer to help guide them with the required maintenance. For example, the BMP details that the City will provide will include inspection and maintenance notes that designers can use on their plans.

Lastly, the volume calculation spreadsheet and a BMP sizing spreadsheet (for bioretention) were shown to the audience. We have attached the pdf version of the preliminary volume calculation spreadsheet. This will give you all a chance to sit down and review this preliminary workbook and hopefully provide us with your feedback (attached survey as well). Each page of the pdf represents a tab in the excel workbook (except for the Detailed Summary, it prints out as two pages, but is only one tab in the

workbook). The first page “Instruction Flow Chart” is a guide on how to use the Excel workbook. Keep in mind, the great feedback that we have gotten so far is to create a simplified input/output sheet after the “Instruction Flow Chart”. We have also gotten the suggestion to create two versions of this Volume Calculation workbook. One to be a slimmed down version, like an executive summary workbook (could be this simplified input/output sheet and hide all of the other tabs) and the other to be the detailed version (which will be the one attached). With your feedback and additional edits on our end, we would like to provide you all with the actual excel workbook. We didn’t think it was wise to do that this time because we don’t want many versions of this workbook floating around.

Again thank you for your participation. The next monthly meeting will be held next Wednesday, June 19th to go over Maintenance and Inspection of BMPs and LID features. The meeting will be held in the same location (7th floor conference room) from 2-4pm. As a reminder, Engineers that have attended these monthly meetings will be credited for PE hours for each meeting (and future meetings). Attendance lists are on the CoC website http://columbia.sc.gov/index.cfm/departments/utilities-engineering/stormwater/stormwater-bmp-manual-upcoming-meetings/.

Also, if there is any feedback from these meetings or summaries, please feel free to contact Dave Briglio, Kelli Resler, William Lamb, Tracy Mitchell, or Dana Higgins. **Please fill out the attached survey** (can be filled out in Word or scanned and sent back), we really would appreciate your suggestions. Again, your input is crucial to the success of the BMP Manual and supporting Design Aids.