CoC BMP Manual

Meeting 5 Minutes

April 17, 2013, 2pm-4pm

7th Floor Conference Room, 1136 Washington St.

Thank you to those who attended Wednesday's (4/17) meeting and contributed to the fifth monthly meeting to develop the City's BMP Design Manual. We wanted to provide you with an overview/minutes of the discussed Detailed Unified Sizing Criteria Exercise & Wet Pond Example. On the website, we have provided a pdf copy of the presentation, and plan to continue providing the presentations for the following monthly meetings.

For this meeting, Dave Briglio went through a step-by-step example to design a wet pond using the Unified Sizing Criteria methodology. For the USC method, the pond must be designed for the Water Quality Volume (WQv) for the 1.2 inch rain event, Channel Protection Volume (CPv) for the 1-year rainfall event, Overbank Flood protection for the 25 year event, and provide safe passage for the 100-yr rainfall event. Hydrology calculations for the USC method to compute the control volumes for the 1-year event (CPv), 25 year event, 100-year event, and any other 24-hour event, use the SCS method that most H&H modeling programs utilize (HEC-HMS, Hydro CAD, Win-TR55, etc.). Step by step calculations to compute these volumes for the wet pond example are shown in the powerpoint attached. The example in the presentation also goes through a quick estimation of the orifice sizes needed for all of the USC control volumes.

For the example discussed, the control volumes calculated for the site's wet pond were computed for the site that did not incorporate any Better Site Designing (BSD) or upland BMPs on site. Therefore, Dave also touched upon how the control volumes would be adjusted if a site was designed with BSD or BMP practices. To simplify it, if more BSD and BMP practices are implemented, the site's remaining water quality volume for the pond will decrease, and, depending on the practice, there is the potential to decrease the peak inflows to the pond which would result in a decrease in the pond's storage volume to runoff volume ratio (see the graph on last slide of the presentation).

Again thank you for your participation. The next monthly meeting will be held next Wednesday, May 15th to go over a detailed Bioretention example and a Vegetated Filter Strip example. This meeting we also plan to show a preliminary draft of the Calculation spreadsheets and Details with the intent to get your input and feedback. 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/. As a reminder, 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. Again, your input is crucial to the success of the BMP Manual and supporting Design Aids.