

CoC BMP Manual
Meeting 4 Minutes
March 20, 2013, 2pm-4pm
7th Floor Conference Room, 1136 Washington St.

Thank you to those who attended Wednesday's (3/20) meeting and contributed to the fourth monthly meeting to develop the City's BMP Design Manual. We wanted to provide you with an overview/minutes of the discussed Applying Better Site Crediting and BMP Sizing. Attached we have provided a pdf copy of the presentation, and plan to continue providing the presentations for the following monthly meetings.

As discussed at the last meeting, Dave Briglio explained the approach to utilizing Better Site Design practices and their associated volume reductions/credit opportunities. This meeting, Dave went into a site example that approached a site design that utilized both traditional methods and Better Site Design (BSD) methods to calculate credits and volumes that could benefit the developer. The attached powerpoint displays how to integrate BSD techniques into the normal approach, but to reiterate, this method should be applied early to see if it is worth the execution. For example, prior to applying the Unified Sizing Criteria approach, the designer must first understand site constraints and its potential in order not to invest too much money and time to this method. To summarize the site planning process that Dave went over in the presentation, the integration of site design credits can be integrated with the process shown in the table below.

Integration of Site Design Credits with Site Development Process	
Site Development	Site Design Credit Activity
Feasibility Study	<ul style="list-style-type: none"> • Determine stormwater management requirements • Perform site reconnaissance to identify potential areas for and types of credits
Site Analysis	<ul style="list-style-type: none"> • Identify and delineate natural feature conservation areas (natural areas and stream buffers)
Concept Plan	<ul style="list-style-type: none"> • Preserve natural areas and stream buffers during site layout • Reduce impervious surface area through various techniques • Identify locations for use of vegetated channels and groundwater recharge • Look for areas to disconnect impervious surfaces
Preliminary and Final Plan	<ul style="list-style-type: none"> • Perform layout and design of credit areas – integrating them into treatment trains • Ensure unified stormwater sizing criteria are satisfied • Ensure appropriate documentation of site design credits according to local requirements.
Construction	<ul style="list-style-type: none"> • Ensure protection of key areas • Ensure correct final construction of areas needed for credits
Final Inspection	<ul style="list-style-type: none"> • Develop maintenance requirements and documents • Ensure long term protection and maintenance • Ensure credit areas are identified on final plan and plat if applicable

The example portrayed in the presentation first went through a conventional design for a strip mall and the volume requirements needed for the site's post development pond. Next, for the same site, the example utilized the process shown above to incorporate BSD techniques and compare results to the conventional site design. For this particular 18-acre strip mall design example, using BSD practices reduced the site's impervious areas, preserved 23% of site's natural conservation areas, achieved the required 80% TSS removal, and reduced the final Water Quality Volume needed for the pond. See the previous month's presentation on how to calculate water quality volume reductions for BSD BMPs.

Dave also discussed some BMP details that will be shown in future presentations. Equations and CAD details that are utilized in the City's BMP Manual and calculation spreadsheets were shown for Bioretention areas and Infiltration Trenches.

Again thank you for your participation. The next monthly meeting will be held next Wednesday, April 17th, to go over a detailed USC Exercise and a Wet Pond example. 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 CoC website <http://columbia.sc.gov/index.cfm/departments/utilities-engineering/stormwater/stormwater-bmp-manual-upcoming-meetings/>. We encourage more to attend, especially those who will succumb to the guidelines set forth in the City's BMP Manual (i.e. the developers who hire the attending engineers). Your input, questions, concerns from these meetings are vital to the success of developing this BMP Manual. Therefore, 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.