CoC BMP Manual

Meeting 3 Minutes

February 20, 2013, 2pm-4pm

7th Floor Conference Room, 1136 Washington St.

Thank you to those who attended Wednesday's (2/20) meeting and contributed to the third monthly meeting to develop the City's BMP Design Manual. We wanted to provide you with an overview/minutes of the discussed Better Site Planning/Design and Volume Reduction Credits. We have also provided a pdf copy of the presentation, and plan to continue providing the presentations for the following monthly meetings.

To reiterate, utilizing the Unified Sizing Criteria methodology is an approach to employ better site design practices for stormwater management that not only treat water quality, but can control water quantity. This methodology will facilitate the use of more green infrastructures, conserve existing natural areas, and reduce the amount of impervious surfaces for a site.

Therefore, for the meeting, Dave Briglio explained the approach to utilizing Better Site Design practices and their associated volume reductions/credit opportunities. By implementing a combination of nonstructural approaches (practices discussed below), it is possible to reduce the amount of runoff and pollutants a site generates from a site and provide for some nonstructural on-site treatment and control. There are several BSD practices, many of which reduce the water quality volume (WQv) requirement by reducing imperviousness (i.e. lower Rv value) and area to be disturbed (i.e. lower A value). But after applying those BSD practices to the design, there are a few calculable reduction or site design "credits" which can then reduce the initially-calculated WQv value - See those listed below.

Better Site Design Practices that provide for Site Design Stormwater Credits (which Dave went into detail on 2/20):

Practice	Description
1. Natural area conservation	Undisturbed natural areas are conserved on a site, thereby retaining their pre-development hydrologic and water quality characteristics.
2. Stream buffers	Stormwater runoff is treated by directing sheet flow runoff through a naturally vegetated or forested buffer as overland flow.
3. Use of vegetated channels	Vegetated channels are used to provide stormwater treatment.
4. Overland flow filtration/infiltration zones	Overland flow filtration/infiltration zones are incorporated into the site design to receive runoff from rooftops and other small impervious areas.
5. Environmentally sensitive large lot subdivisions	A group of site design techniques are applied to low and very low density residential development.

For each potential credit, there is a minimum set of criteria and requirements (e.g., flow length, contributing area, etc.) which identify the conditions or circumstances under which the credit may be applied. Site designers are encouraged to utilize as many credits as they can on a site, hopefully more than needed to provide flexibility for the final design. Greater reductions in stormwater storage volumes can be achieved when many credits are combined (e.g., disconnecting rooftops and protecting natural conservation areas). However, credits cannot be claimed twice for an identical area of the site (e.g. claiming credit for stream buffers and disconnecting rooftops over the same site area). The designer will need to assess such an area that can be used for multiple credits, and decide which offers the best WQv credit: the volume related to treating its own runoff (i.e. conservation area), or the volume related to treating the area flowing to it (i.e. buffer/veg. channel). Also, the City plans to decrease cost on user fees if BSD and BMP practices are utilized for the site.

How the volume reduction credits work: Examples were provided in the presentation, but some group discussion talking points are listed below:

Items Discussed:

- **Credit #5:** It was deduced that the City will most likely not come across Environmentally Sensitive Large Lot Subdivisions, therefore, need to consider to either removing this credit or adjusting it.
- How to incentivize commercial/retail developers
  - Incentive for developers to sell lots w/ user fees/residential fees→ developer can tell house buyers/owners their fees go down. Similar to reducing HOA fees
- Rain harvesting/Cisterns: such a BMP is not restricted for use, but CoC's BMP Manual are focusing on design aids for only 6 of the most commonly used BMPs. However, designers can still do crediting for BMPs that are not included those 6, but they will have to develop their own calculation tool.
  - However, Tracy noted that it is "hard to incentivize Rain harvesting/Cisterns because CoC's goals are to credit development/redevelopment…not residential lot on a lot by lot basis"
- BSD Credits for reducing the site's total WQv may also be used to show that runoff volumes and rates from larger events can be lowered (i.e. justify a reduced site CN value). However, certain BSD practices cannot be used to reduce runoff because they are used to filter pollutants and not retain/infiltrate run off. This criteria will also be applied for upland BMPs that could be designed for a site.
- Engineers that have attended these monthly meetings will be credited for PDHs (Professional Development Hours) for each meeting (and future meetings). Past attendance lists are on the 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.

Again thank you for your participation. The next monthly meeting will be held March 20th to discuss Applying Better Site Crediting and BMP Sizing. The meeting will be held in the same location (7th floor conference room) from 2-4pm. 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. Again, your input is crucial to the success of the BMP Manual and supporting Design Aids.