

Bioretention Cell Design Review Check List

April 2015

Applicant: _____ Date: _____

Submitted By: _____ Project Location: _____

- 1) Drainage Area _____ SF and _____ Ac
- 2) How much of the DA is Impervious Surface _____ % and _____ SF (if soil quality restoration is done or if soils investigations indicate green space is capable of absorbing the WQv the green space can be eliminated from the DA for WQv calculation. If neither applies, assume ½ of the green space is equivalent to impervious surface.)
- 3) Water Quality Volume (WQv) _____ CF (show calculations below or attach a copy)
 $WQv = (P) \times (Rv) \times (DA) \times 43,560 \text{ SF/ac} \times (1 \text{ ft}/12\text{in})$
- 4) Surface Area of Biocell _____ SF (show calculations below or attach a copy)
 $Af = WQv \times df / \{K \times (hf + df) \times tf\}$
- 5) Ponding Depth _____ inches
- 6) Proposed dimensions: _____ ft L x _____ ft W = _____ SF of surface area.
- 7) Discuss soils investigation findings (i.e. texture, degree of compaction, percolation potentials, depth to water table, contamination, etc) _____

- 8) Describe any pretreatment techniques provided (what practice(s) were used, how were things sized, etc) _____

- 9) Describe the biocell soil media. (Soil blend specified in the Iowa Stormwater Management Manual is 75-90% washed concrete sand, 0-25% topsoil, 0-10% compost):
 - a. Sand _____ %
 - b. Topsoil _____ %
 - c. Compost _____ % compost
- 10) Quantities (please attach a copy of materials calculations): 75-85% sand, 0-25% topsoil, 0-10% compost)
 - a. Sand _____ tons;
 - b. Topsoil _____ tons or CY
 - c. Compost _____ tons or CY
 - d. 3/8" chip _____ tons
 - e. Shredded hardwood mulch _____ CF or _____ CY

- 11) Depth of Rock Chamber _____ inches
- 12) Quantity and Type of Rock _____ tons of _____
- 13) Quantity and Type of choker material _____ tons of _____
- 14) Size of perforated drain tile _____ inch
- 15) Does tile comply with the design guidance is Step 10 of the design procedure in the Bioretention Chapter of ISWMM _____ Yes _____ No
- 16) Separation distance from nearest foundation _____. If less than 10 ft describe water proofing methods _____

- 17) Describe outlet for the perforated drain tile _____

- 18) Describe overflow (i.e. stand pipe, swale, emergency spillway / berm notch, etc.)

- 19) Spacing of plants _____
- 20) Size of plants _____
- 21) Quantity of plants _____ (Please attach a plant list and planting plan)
- 22) If supplemental seeding was done in the biocell describe type and quantity of seed used and the rate that was applied (i.e lbs/ac or per 1,000 SF)

- 23) Please describe the Erosion and Sediment Control measures employed if the drainage area is not stabilized or the biocell is not planted and stabilized immediately:

- 24) Please attach a map of the drainage area.
- 25) Please attach a plan view, profile and cross sectional drawing

FOR REVIEWER USE ONLY

- This design appears to comply with the standards in the Iowa Stormwater Management Manual.
- This design does not appear to comply with the standards in the Iowa Stormwater Management Manual.

Comments: _____

Name _____ Date: _____

Signature: _____