

**Design Review Checklist for Bioretention Cell Systems
(Project Review)**

Project Name: _____

Applicant: _____ Date: _____

Submitted by (Designer): _____ Location: _____

Project Review Questions

1. What is the total drainage area to the bioretention cell? _____

2. What is the impervious % of the watershed area to the bioretention cell? _____

3. Total WQv to be treated by the bioretention cells? _____

4a. What is the required level ponding surface area of the bioretention cell? _____

4b. What is the provided level ponding surface area of the bioretention cell? _____

5. What is the proposed WQv ponding depth above the level surface of the bioretention cell? _____

6. Discuss soils investigations findings (e.g. texture, degree of compaction, percolation potential, depth to water table, contamination, etc.). Attach related report, as applicable.

7. Describe pretreatment techniques provided (what practice(s) were used, how were things sized, etc.)

8. Describe the bioretention soil media (refer to Iowa Stormwater Management Manual for soil mixes).

Sand _____
Topsoil _____
Compost _____
Total _____

9. Quantities (please attach a copy of materials calculations) (quantity, units).

Sand _____
Topsoil _____
Compost _____
Shredded hardwood mulch _____

10. Is the surface of each ponding area proposed to be level from end to end and side to side? Yes No

11. What is the depth of the aggregate materials?

12. What is the quantity and type of stone aggregate "base" materials (provide quantity calculations)?

13. What is the quantity and type of stone aggregate "choker" materials (provide quantity calculations)?

14. What are the sizes of the perforated subdrains?

15. Does the subdrain exceed the length calculated in Step 10 of the ISWMM procedure for bioretention cells?
 Yes No

16. What is the minimum separation distance from the nearest building foundation? _____ ISWMM guideline: 25 feet

17. Describe the outlet for the subdrains (connection to inlet, connection to manhole, surface outfall, etc.).

18. Describe the overflow conditions from the bioretention cells for larger storm events (surface inlet, multi-stage inlet structure, overflow spillway, etc. - provide descriptions).

19. Describe the types of plants to be installed within the bioretention cells (general types, spacing, etc.).

20. Describe the size of plants to be installed within the bioretention cells (sizes of pots, plugs, etc.).

21. Describe the quantity of plants to be installed (attach a plant list and planting plan).

22. If seeding is to be done within the bioretention cells, describe the type and quantity of seed along with the proposed application rate (attach a seed mix list).

23. Describe the erosion and sediment control measures to be employed around the cell and in the contributing drainage area.

24. Attach a map of the area expected to drain to the bioretention cells. The map should note all impervious surfaces and show the path of flow to each bioretention cell.

25. Attach a plan view, profile view and applicable cross-sections for proposed construction of the bioretention cells.

26. Has supporting information been provided as applicable (calculations, drainage maps, plans, etc.)?

Yes No

N/A: _____