Bioswales Design Review Check List

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) Discuss soils investigation findings (i.e. texture, degree of compaction, percolation potentials, depth to water table, etc) ______________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

WQv _________________CF (show calculations below or attach a copy)

WQv= (Rv) x (P)x (DA) x 43,560 SF/ac x (1 ft/12in)  (See Iowa SW Mgt Manual)

5) Type of cross section (check one) _____ Trapezoidal _____ Parabolic

6) Length of Bioswale ________________Ft (show calculations below or attach a copy)

7) Lbioswale = Tres x V x (60 sec/min)  (See Iowa SW Mgt Manual)

8) Bottom Width (if trapezoidal)______________________Ft

9) Side Slopes (if trapezoidal)_____:______

10) Top width (if parabolic) _______________ Ft

11) Grade of Swale_____________%

12) Residence time _______________minutes

13) Velocity _______________fps

14) Type of berm (rock or earth) _____________________________

15) Height of berms ___________________________inches

16) Spacing of berms (from toe of upper berm to ridge of the next lower berm) __________ ft.

17) Describe the soil media. (Soil blend specified in the Iowa Stormwater Management Manual is 75% - 90% washed concrete sand, 0-25% topsoil, 0-10% organic material):

   a. Sand ___________

   b. Topsoil _________%

   c. Organic material ________%

18) Quantities (please attach a copy of materials calculations)

   a. Sand _______________tons;
b. Topsoil _____________ tons or CY;
c. Organic material _____________ tons or CY

19) Depth of Rock Chamber the tile is bedded in _______________ inches. Quantity & Type of Rock
   ___________ tons of ________________________________

20) Was the tile trench filled with soil media or choker material (3/8” chip)

21) Quantity and Type of choker material _______ tons of ___________________________

22) Size of perforated drain tile _____________ inch

23) Describe any pretreatment techniques provided (what practice(s) were used, how were things sized,
   etc) _____________________________________________________________________________
   ________________________________________________________________________________

24) Describe outlet for the bioswale and the perforated drain tile ____________________________
   ________________________________________________________________________________
   ________________________________________________________________________________

25) Spacing of plants __________

26) Size of plants __________________

27) Quantity of plants ________ (Please attach a plant list and planting plan)

28) If seeding was done describe type and quantity of seed used and the rate that was applied (i.e lbs/ac
    or per 1,000 SF) __________________________________________________________________
    ________________________________________________________________________________

29) Describe the erosion control installed to protect the bioswale until vegetation is established ______
    ________________________________________________________________________________
    ________________________________________________________________________________

30) If residence time and velocities that manage the water quality volume (WQv) can’t be achieved,
    describe the treatment train components that will be added to manage the WQv
    ________________________________________________________________________________
    ________________________________________________________________________________

31) Please attach a map of the drainage area.

32) Please attach a plan view, profile and cross sectional drawing

FOR REVIEWERS 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 of Reviewer: ___________________________ Date: ________________