

Delaware Department of Transportation

Bioretention Facility Construction Checklist

*This checklist has been designed for (insert type)
in accordance with the Delaware Sediment and Stormwater Program's
Post Construction Stormwater BMP Standards and Specifications*

Contract No.:	_____	Contract Name:	_____
Contractor:	_____	Contractor Project Supt.:	_____
CCR Name:	_____	CCR No.:	_____
BMP No.:	_____	BMP Location (Road/Crossroads):	_____
<u>Construction Dates & Time:</u>			
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

KEY:

<u>✓</u>	Item meets standard
<u>X</u>	Item not acceptable
<u>N/A</u>	Item not applicable

I. Pre-Construction

- _____ A. Pre-Con meeting held.
- _____ B. Facility location staked out. Facility delineated & access prohibited by heavy equipment.
- _____ C. Upstream drainage area stabilized or diverted.
- _____ D. Materials on-site and verified.
 - _____ 1. Underdrain/discharge pipe
 - _____ 2. Outlet structure.
 - _____ 3. Undrain stone
 - _____ 4. Filter fabric (*if applicable*)
 - _____ 5. Approved soil media (*2014 Bioretention Mix*)
 - _____ 6. Plant Material (*Note: Plants made available upon final stabilization of the facility as per the approved plan.*)

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II. Excavation

_____ A. Facility excavated to dimensions and at location as per the approved plan.

_____ B. Infiltration Bioretention facilities stepwise excavation. *(Note: Excavate the portion of Bioretention facility that may be backfilled with approved soil media in the same day.)*

_____ C. Facility excavated from the sides as per the approved plan

_____ D. Groundwater not encountered during excavation. *(Note: If groundwater is encountered during the excavation process, construction of the Facility must cease and the designer notified.)*

_____ E. Vertical excavation of sides.

_____ F. Bottom excavation elevation as per the approved plan.

_____ G. Bottom & sides scarified prior to placement of approved soil media.

III. Structural Components *(Bioretention facilities containing underdrains and/or pipe discharge components.)*

_____ A. Discharge pipe installed from outlet structure to discharge point.

Discharge Pipe diameter: _____

Discharge Pipe material: _____

_____ B. Outlet protection provided at discharge point.

_____ C. Outlet Structure installed at elevations as per the approved plan. *(Minimum of 6" higher than top elevation of approved soil media as per the approved plan.)*

_____ D. Underdrain pipe material according to the approved plan. *(Note: If underdrain pipe material is not specified, it shall be SDR 35 minimum)*

Underdrain Pipe material: _____

_____ E. Underdrain pipe sizes according to approved plans.

Discharge Pipe diameter(s): _____

_____ F. Underdrain pipe perforations according to approved plans. *(Note: If not specified on the plan, three rows of 5/8" diameter perforations, 6" on-center, shall be provided)*

_____ G. Underdrain piping lay flat or with positive slope toward outlet.

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_____ H. Clean-out and/or observation port provided at the endpoint of underdrain pipes.

_____ I. Double-washed crushed aggregate, clean DE No. 57 stone, used for the underdrain gravel. Stone free of rock dust, fines and soil particles.

_____ J. 3" minimum specified gravel cover over underdrain pipe.

_____ K. Filter fabric (*if applicable*) installed between the underdrain gravel layer and the approved soil media as per the approved plan.

IV. Grading

_____ A. Channel protection and/or level spreader provided at inlet to bioretention facility as per the approved plan

_____ B. Side slopes $\leq 3:1$ above the approved soil media.

_____ C. Top of berm constructed as per the approved plan.

_____ D. Earthen spillway constructed as per the approved plan.

V. Bioretention Soil Media

_____ A. Approved soil media provided per the latest revision of the DNREC policy.

_____ B. No equipment is permitted in the infiltrating area of the facility.

_____ C. Approved soil media placed in one-foot lifts and spread evenly.

_____ D. Approved soil media placed simultaneously with excavation process to prevent contamination of the infiltrating area of the facility.

_____ E. Final lift of the approved soil media will not be placed until a minimum of one-storm event occurs.

_____ F. Approved soil media will be not less than 36" depth or as specified in the approved plan.

_____ G. Top-dress final elevation of approved soil media with 3" of triple-shredded aged hardwood mulch or as per the approved plan.

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