

Bioretention Areas

Definition/Purpose

Bioretention is the use of plants and soils for removal of pollutants from stormwater runoff. Bioretention can also be effective in reducing peak runoff rates, runoff volumes and recharging groundwater by infiltrating runoff.

Policies

1. Bioretention areas are intended to treat impervious surface areas of greater than 2500 ft². Refer to backyard rain garden practice if treating less than 2500 ft².
2. The seasonal high water table must be at least two feet below the proposed bottom of the facility.
3. Bioretention facilities may be constructed using native soils when the soil infiltration rate is at least 1 inch/hour. Installation in clay soils will require an imported soil mix and underdrains to achieve the minimum infiltration rate.
4. In draining to nutrient sensitive waters, the bioretention facility shall utilize a soil media with a P-Index between 15-40 to promote phosphorus removal.
5. Grassed swales, filter strips, or other structural practices such as forebays should be considered as a method of pretreatment to reduce sediment loading.
6. Native plant species capable of tolerating the extreme moisture conditions typical of this practice should be specified over non-native, invasive, or exotic species that require excessive care.

Specifications

NC DENR Stormwater BMP Manual: Bioretention

http://portal.ncdenr.org/c/document_library/get_file?uuid=199a62d4-3066-4e24-a3f1-088c6932483a&groupId=38364

Additional resources:

<http://www.bae.ncsu.edu/stormwater/PublicationFiles/DesigningRainGardens2001.pdf>

<http://www.bae.ncsu.edu/topic/bioretention/design-sizing.html>

<http://www.bae.ncsu.edu/stormwater/PublicationFiles/Bioretention2006.pdf>