

Voluntary BMPs Workshop DRAFT

Retain Your Rain! Stormwater Solutions for Homeowners

Webinar discusses the impacts of inadequate stormwater management, conventional solutions, and stormwater best management practice alternatives. For each BMP, the webinar will describe what it is, the function & application, and benefits & limitations. The webinar is intended for homeowners who are considering implementing a BMP for an erosion or drainage problem rather than as a condition of development.

Welcome, Intro of askHRGreen and speakers

Agenda:

What are BMPs? Inadequate Stormwater Management Consequences (Speaker??)

Conventional Solutions

Best Stormwater Practices for Homeowners

BMPs – what are they, why are they needed

Land-management and landscaping practices that control stormwater and erosion by capturing and/or encouraging runoff from rooftops and pavement to infiltrate into the ground

Can be installed with new home site plan approval & construction or voluntary retrofit. They can fit just about anywhere.

Why:

- Response to environmental, planning, and development concerns starting in 1970s
- Cleans water before outfall to rivers, bays, and streams
- Slows water in channels to prevent erosion
- Encourages infiltration for groundwater recharge
- Allows smaller practices that fit development
- Uses nature-based techniques and advanced tech
- Provides multiple benefits in same space

Smarter way to manage rain fall water with green infrastructure. GI uses natural processes to slow and store water. Planted areas designed to capture runoff and temporarily store rainwater so it doesn't flow into the drain all at once and overwhelm the system causes backups and localized flooding. A portion of the water is absorbed by the native plants themselves. Plants help filter out pollutants both above and below the surface giving the additional benefit of improved water quality.

Common types:

Bioretentions

Micro-Bioretentions or Rain Gardens

Dry Swales

Infiltration Systems

(Infiltration Trench, Vegetated Swales, Conservation Landscaping;
Focus on: Dry well, Permeable Pavers, Rain barrels and Cisterns, Rain Gardens)

Rain barrels, cisterns, rain gardens: Flow through planter boxes, dry wells, infiltration trench, permeable pavement, green roofs, nutrient management plans, conservations landscaping with native plants, native tree planting

BMP Maintenance

Proper Maintenance of BMPs should be integrated into routine landscaping needs.

- Maintaining elevation differences needed for ponding
- Proper mulching and landscaping
- Sediment and trash removal
- Limit fertilizers and pesticides
- New homeowners may already have one and not know it. **

Inadequate Stormwater Management Consequences (Speaker??)

Increase in water volume, decreases water quality

Damage to public, private property: erosion, loss of vegetation, flooding, waterlogging, property value depreciation

Conventional Solutions: Downspout extension, catch basins, dry creek bed, French drain?

Limitations of these solutions: concentrate the flow, ineffective in dealing with large volumes, maintenance intensive, outfall limitations, no quality/quantity benefits, usually not supported by cost-share programs

Combining Conventional Solutions vs Best Practices

Long term solutions, less maintenance required, cost competitiveness, aesthetic benefit, stormwater quality improvement, volume reduction, eligibility for cost share funding, use of native plants

Best Stormwater Practices for Homeowners

Conventional Solutions

Dry well, Infiltration Trench, Vegetated Swales

Description, Function & Application and Benefits & Limitations of each

Conservation Landscaping (Speaker? ERP, Wetlands Watch, Lynnhaven River Now)

Rain Gardens, Permeable Pavers, Rain barrels and Cisterns

What is it? Replacing turf grass, invasive plants, or bare soil with native plants

How it functions: native plantings help to intercept and slow down runoff, encouraging some of it to infiltrate into the ground.

Benefits: lower cost, easy to install as DIY, beautification, may grow where grass will not in wet, shady areas, manages small amounts of runoff

Why native plants?

Well adapted to our area, insects, don't need as much watering or fertilizer, support wildlife, deep-rooted

Rain Gardens

micro-bioretenion filers; landscaped depression that temporarily capture, slow down and filter rainwater; need to drain in 24-48 hours to eliminate mosquito reproduction
what they are, gravel filter and underdrain
rain garden benefits & limitations
Possible DIY yourself or contractor

Permeable Pavers

Asphalt, cement, interlocking pavers
Usually contractor

Rain Barrels & Cisterns

collect water for use around yards and gardens
DIY, low-cost (free in Norfolk to BSH Members)

Consider site restrictions and conditions

Cost assistance programs??