How to Maintain your Bioretention Facility:

- Regularly inspect your bioretention facility to ensure that it **does not** contain:
  - Compost
  - Fresh grass clippings
  - Animal waste
  - A different soil mixture than specified in the design
  - Plants that prefer dry conditions
  - Swimming pool water
- **Weed** unwanted plant materials.
- **Fertilization** is ***not*** usually necessary – if a soils test shows fertilization is needed, use an organic fertilizer.
- **Watering** of the facility may be necessary during prolonged dry spells if shrubs or trees were planted within the last three years.
- **Inspect your facility after rainstorms** to ensure that drainage paths are unobstructed and that the ponding water dissipates within 1-2 days.
- **Old mulch should be removed and replaced** with new mulch (shredded hardwood) at least once every six months—to a depth of no more than three inches.
- **Stabilize eroded areas** on drainage paths with sod or small stones (1-2" in diameter).
- **Replace plants that do not perform well**– divide overcrowded plants in the spring or fall.
- **Remove any trash or debris** from the facility.
- **Plants should not be cut back until spring** – plants can be pruned as necessary to remove diseased or damaged plant parts or to encourage new growth.

For more information on Bioretention Facilities:

- *Rain Gardens: A How-To Manual for Homeowners:* http://www.dnr.state.wi.us/org/water/wm/dsfm/shore/documents/rgmanual.pdf
- *Rain Gardens Technical Guide:* http://www.dof.virginia.gov/mgt/resources/pub-Rain-Garden-Tech-Guide_2008-05.pdf

Source for garden plans, resources and information:

- http://www.raingardens.org
- *Rain Garden Design Templates:* http://www.lowimpactdevelopment.org/raingarden_design/templates.htm

Contact Stafford County about Bioretention Facilities!

Stafford County Department of Public Works
1300 Courthouse Road, PO Box 339
Stafford, Virginia 22555
Phone: 540-658-8650

http://www.co.stafford.va.us/index.aspx?NID=180

Stafford County, Virginia

Low Impact Development: *Bioretention Facilities*

Stafford County is concerned about protecting our valuable water resources. Therefore, the County is encouraging the use of Low Impact Development (LID) in new development. ***Bioretention facilities are a common element found in communities constructed using LID techniques*** *and the County has developed this brochure to educate citizens about the function and the maintenance required for this type of facility.*

What is LID?

LID stands for **Low Impact Development**, also referred to as Better Site Design. It's the process of developing land while minimizing impacts on water resources and infrastructure. LID techniques are used to limit the amount of storm water leaving a development site to the same amount as before the project was constructed. For more information check out other Stafford County brochures!

Image Courtesy of DCR

Stafford County, Virginia

Low Impact Development:

Why Do We Need LID?

As the County grows, previously undeveloped land becomes more densely developed through the addition of residential, commercial and industrial areas. This leads to an increase in impervious area causing an increase in stormwater runoff.

This increase in development causes:

- Decreased base flows in streams
- Increased peak stormwater runoff and flooding
- Reduced recharge of groundwater
- Increased stream bank erosion
- Severe impact on vegetation

LID practices are designed to:

- Maintain stormwater runoff from a development site at the same levels and volume as before the development occurred
- Decrease stormwater pollution
- Recharge groundwater
- Reduce downstream flooding and stream bank erosion

What are Bioretention Facilities?

Bioretention facilities, also known as rain gardens, are depressions in yards or adjacent to paved areas, designed to absorb stormwater runoff from impervious surfaces such as roofs, driveways and parking lots. The areas are usually landscaped to provide an attractive feature planted with perennial native plants.

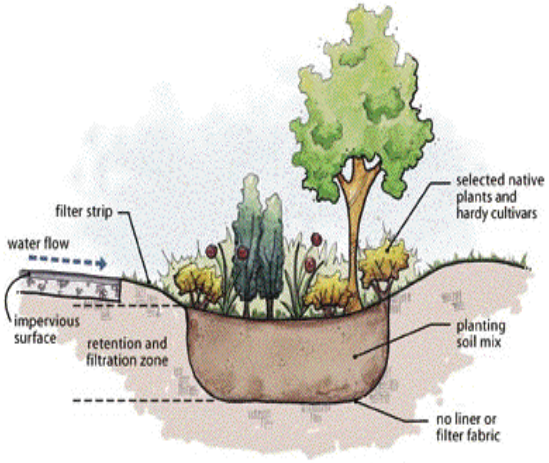

Image Courtesy of the Low Impact Development Technical Guidance Manual for the Puget Sound

Why are they Environmentally Friendly?

Bioretention facilities capture and filter stormwater runoff that would otherwise flow down the street to a storm drain, increasing the amount of water and pollutants discharging into our streams, lakes and the Chesapeake Bay.

Why is Maintenance Important?

Proper maintenance is essential to ensure that the facilities function correctly and provide stormwater management benefits over the full life cycle of the installation.

Maintenance of bioretention facilities on residential properties is either the responsibility of the homeowner or the Homeowners Association, depending on the conditions of the Stormwater Management Agreement for the neighborhood. This brochure provides a summary on the types of maintenance required.

County Inspection Program

The County initiated routine inspections of stormwater facilities in January of 2009 to confirm that the requirements of maintenance agreements are being met. Prior to an inspection being scheduled for a facility, the County notifies the owner by letter. The owner has the option of allowing the County staff to conduct the inspection or they may hire a registered design professional to perform the inspection and submit a written report of the results.