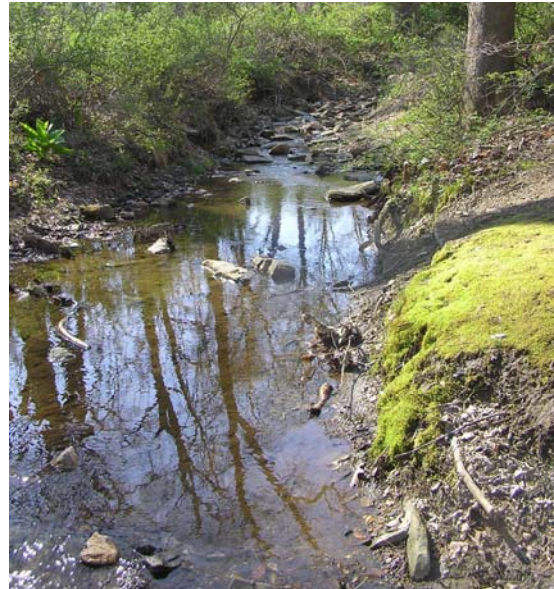


Environmental Issues In Your Backyard

Backyard Stream

Healthy backyard streams need to have an established buffer zone. A buffer zone is a transition zone between the backyard and the stream. The buffer zone is vegetated to decrease the amount of pollutants that can reach a stream from a backyard. The vegetation acts as a filter.

Begin a buffer zone with a no mow area (the wider the better) that follows the stream bank. Be sure that the grass is at least three inches high. Plant shrubs and trees that need little or no fertilizers to stabilize the shoreline and reduce erosion. Use fertilizers, pesticides, and herbicides in your yard only when necessary, and be sure to follow all directions for application. To further reduce the amount of pollutants reaching the stream, store firewood, trash, and other materials away from streams.



To ensure that the quality of your backyard stream is maintained educate your neighbors on practices that will protect the stream's health. One practice could be a neighborhood trash pick-up day that will not only improve the appearance of your neighborhood, but also improve the health and water quality of your backyard stream.

Where To Get Help for backyard stream information

- Soil Erosion and Rainwater Runoff Harm the Chesapeake Bay;
<http://www.mda.state.md.us/pdf/tip3.pdf>
- Cecil Soil Conservation District; 410-398-4411 ext. 3; <http://www.cecilscd.com>
- Caring for your Backyard Stream;
<http://www.delawareestuary.org/pdf/HomeownersGuideSWMgmt.pdf>
- The Backyard Stream Guide (pgs. 4-9);
<http://www.conservect.org/ctrivercoastal/PDFs/BackyardStreamGuide.pdf>

Rain Barrels

By collecting rainwater from rooftops before it reaches the sewer system, the capacity of the city sewer system is increased. Rain barrels are designed to temporarily store rainwater runoff from rooftops. The runoff into rivers and streams, and eventually drinking sources can be reduced with the use of rain barrels. Less runoff results in a higher quality of water in rivers and streams.

A rain barrel is a 55 gallon drum that is connected directly to a downspout. Water is collected in the drum to be saved for later use. Water from a rain barrel can be used to water lawns and gardens and wash cars. A rain barrel must be emptied before the next storm to ensure the barrel functions properly.



Rain barrels can be wooden or plastic. This plastic, 55 gallon drum rain barrel is located at the Fair Hill Nature Center.

Image Credit: Wooden Rain Barrel

<http://www.ne-design.net/oak-whiskey-barrel.html?from=FarmersMarketOnline>

Where To Get Help for rain barrel information

- Rain Barrel Step-by-Step Construction Instructions;
<http://www.greentreks.org/eacnetwork/pdf/PWDFinalHomeownerBMPManual11006.pdf>
- Maryland Department of the Environment's Building a Rain Barrel;
http://www.mde.state.md.us/assets/document/water_cons/rainbarrel.pdf
- Rain Barrel Construction
<http://www.montgomerycountymd.gov/Content/DEP/Rainscapes/pdf/barrel.pdf>
- Aqua Barrel
<http://www.aquabarrel.com>

Rain Gardens

During a one-inch rainstorm, over 750 gallons of water fall on 1,200 square feet (about half the space of ground covered by the average American house). That is a larger quantity of water rushing off into storm drains or perhaps saturated lawns.

Rain gardens are gaining popularity as a way to control stormwater runoff on residential properties. A rain garden is more than just a bed of pretty plants, properly sized and installed, a rain garden can collect and filter large quantities of water. This helps keep pollutants such as fertilizers, motor oil, and heavy metals out of streams, and it saves time and money that otherwise might have been spent watering a lawn or delicate flowers.

The difference between a traditional garden and a rain garden lies underground and in the plant selection. A rain garden is positioned slightly down-slope of a gutter in order to catch the rainwater. The ground is dug to a depth of about 6 inches and refilled about halfway with a mixture of topsoil and organic material, compost, or shredded leaves and sand. If heavy clay soils are present, other amendments such as vertical cores of gravel may be needed. For more information on the soil types in your yard, contact the Cecil Soil Conservation District at 410-398-4411, extension 3.



Image Credit: A newly installed Rain Garden
http://www.ct.nrcs.usda.gov/rain-garden_tac.html

Rain gardens are generally best sited in sunny locations, and the plants that do best in them often prefer full to partial sun. Plants selected for rain gardens must be able to tolerate drought as well as periodic flooding. Selecting plants with large root systems is also beneficial. Luckily, many attractive native plants fit these requirements. A two to three inch layer of mulch keeps the plants moist and provides additional filtration. Before installing a rain garden can be installed, conduct an infiltration test (see page 35).

Tips for Planting a Rain Garden

- **Picking the location:** Sunny areas where the land slopes slightly away from the house are best.
- **Determining the Size:** Measure the area of roof that will drain to the downspout. The garden should be about 20% of the size of the area to be drained.
- **Keep your Distance:** Plant the rain garden at least 15 feet away from the house.
- **Don't fear the mosquitoes:** Mosquito larvae take 7 to 10 days to mature. A well-designed rain garden should drain in 3 days or less. A rain garden will also attract predators such as birds, toads, and dragonflies to keep bugs at bay.
- **Choose native plants with large root systems:** Native plants are generally best suited to the rain garden environment. Not all non-native (exotic or introduced) plants are invasive, however, many plants that have been classified as “invasive” or detrimental to the environment are still available in nurseries. Please see the “Controlling Noxious Weeds and Invasive Plants” section for more information. As in any garden, if the location is central, site tallest plants in the center and plant gradually smaller ones toward the edges. If you are only viewing one side, plant the tallest species in the back. Look for varieties that provide color throughout all seasons.



Image Credit: A simple rain garden

<http://www.dof.virginia.gov/rfb/rain-gardens.shtml>

Where To Get Help for rain garden information

- A Rain Garden Manual for Homeowners;
<http://www.greencitybluelake.org/images/land/rain-garden-manual.pdf>
- A Homeowner's Guide to Stormwater Management, Tree Planting & Invasive Plant Guide;
<http://www.greentreks.org/eacnetwork/pdf/PWDFinalHomeownerBMPManual11006.pdf>
- Chesapeake Ecology Center publication, *Ecoscaping Back to the Future*;
<http://www.chesapeakeecologycenter.org/>
- National Park Service publication, *Plant Invaders of the Mid-Atlantic*;
<http://www.nps.gov/plants/alien/pubs/midatlantic>