UNIVERSITY OF MARYLAND EXTENSION | MASTER GARDENER

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Stormwater Management

The three principles for managing stormwater on your property are:

Slow it down

Spread it out

Soak it in

Control Soil Erosion and rainwater runoff

https://mda.maryland.gov/resource_conservation/Documents/tip3.pdf

Stormwater Management

How to Manage Stormwater in the Chesapeake Bay Region

https://extension.umd.edu/hgic/topics/stormwater-management

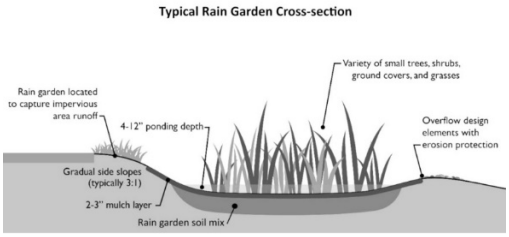
SMART Tool

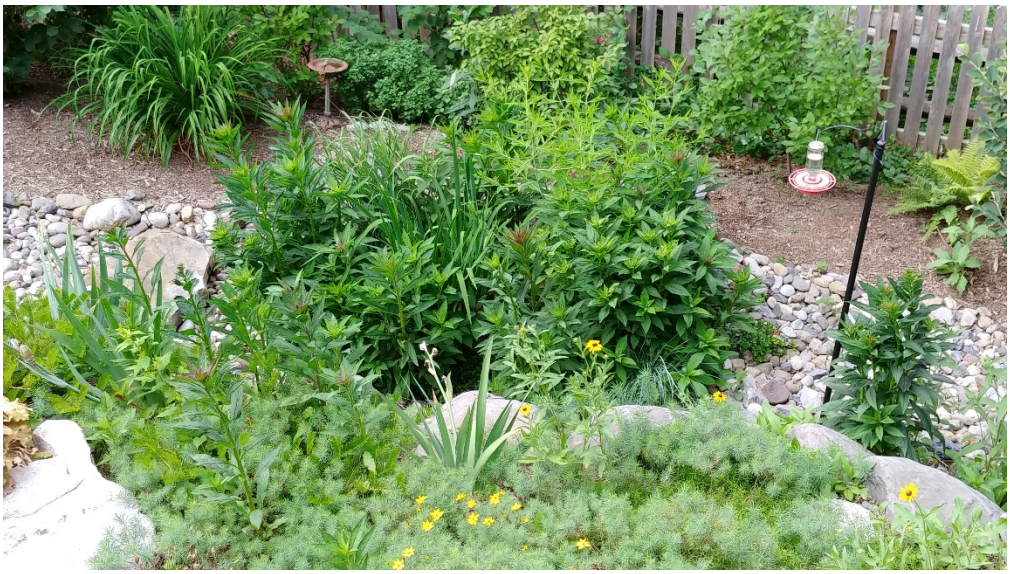
Stormwater Management and Restoration Tracker (SMART)

https://extension.umd.edu/watershed/smart-tool

Rain garden: https://extension.umd.edu/watershed/rain-gardens

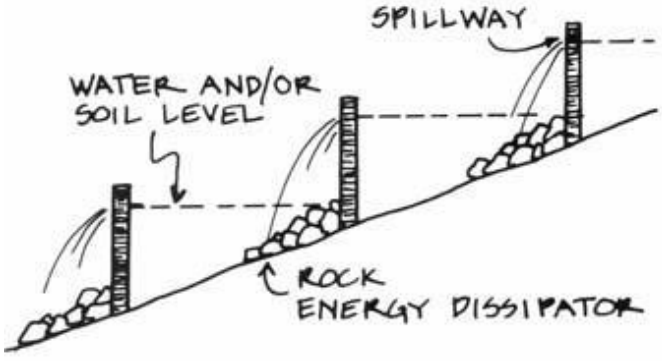
A rain garden is a garden of native shrubs, perennials, and flowers planted in a small depression, which is generally formed on a natural slope. It is designed to temporarily hold and soak in rain water runoff that flows from roofs, driveways, patios or lawns. Rain gardens are effective in removing up to 90% of nutrients and chemicals and up to 80% of sediments from the rainwater runoff. Compared to a conventional lawn, rain gardens allow for 30% more water to soak into the ground.





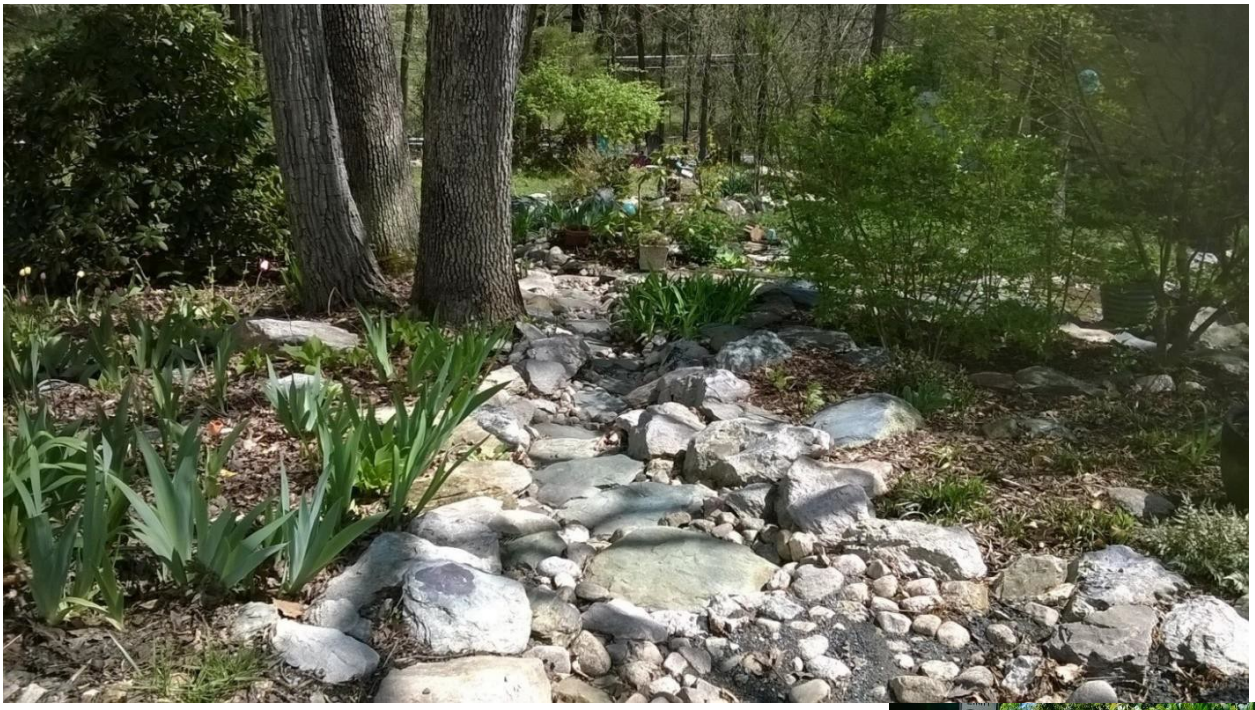
Check dam: https://www.escondido.org/Data/Sites/1/media/pdfs/Utilities/BMPCheckDams.pdf

A Check Dam is a small, sometimes temporary, dam constructed across a swale, drainage ditch, or waterway to counteract erosion by reducing water flow velocity and can be used to enhance sediment trapping. Typical check dam materials include rock, earth, wood, and concrete.



Dry stream bed: https://www.diynetwork.com/how-to/outdoors/landscaping/how-to-install-a-dry-creek-bed

A dry stream bed, is a gully or trench, usually lined with stones and edged with plants to mimic a natural riparian area. It's a natural looking approach to divert water.

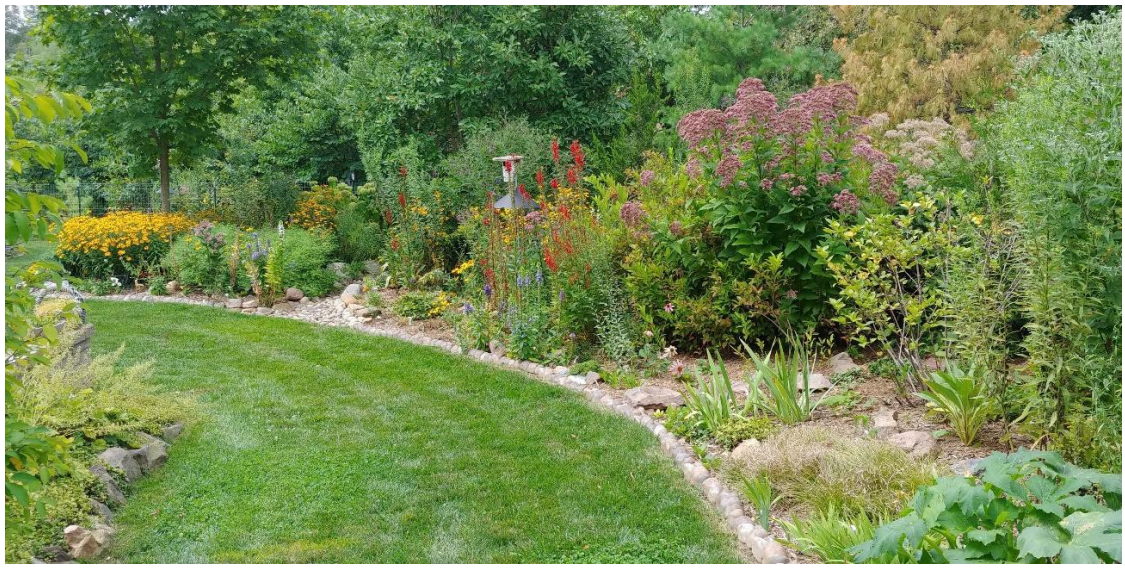


Rain barrel: https://extension.umd.edu/watershed/rain-barrels-and-cisterns

Rain barrels capture water from a roof that would otherwise be lost to runoff and diverted to storm drains and streams and holds it for later use such as on lawns, gardens or indoor plants. Collecting roof runoff in rain barrels reduces the amount of water that flows from your property. It's a great way to conserve water and it's free for use in your landscape.

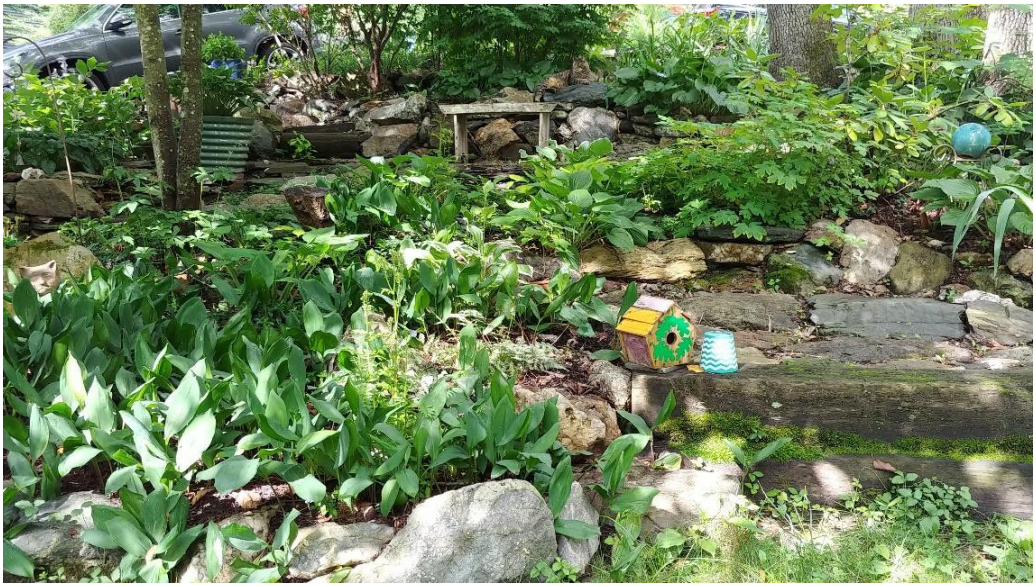
Conservation landscaping: https://extension.umd.edu/watershed/conservation-landscaping

A conservation landscape is a garden that improves water quality, promotes and preserves native species, and provides wildlife habitat by trapping localized storm water on site to insure slow percolation and increased filtration of nutrients entering the gr



Terracing: https://www.gardeningknowhow.com/garden-how-to/projects/building-terrace-gardens.htm

Terraces can create several mini-gardens in your backyard. On steep slopes, terracing can make planting a garden possible. Terraces prevent erosion by shortening the long slope into a series of shorter, more level steps. This allows heavy rains to soak into the soil rather than run off and cause erosion.

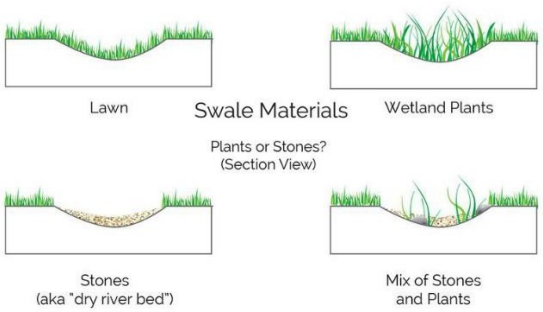


Drain trough:

Drain troughs work well to help protect areas where erosion may be an issue by slowing down the flowing water and diverting it to another area.

Swales and Berms: http://www.cchrc.org/sites/default/files/docs/Swale_Berm.pdf

Vegetated or grassed swales are shallow, open channels that are specifically engineered to slow stormwater runoff while also removing pollutants. Vegetated or grassed swales are shallow, open channels that are specifically engineered to slow stormwater runoff while also removing pollutants. A berm is a wall or mound of earth used to slow or direct runoff often accompanied by a swale which will absorb the runoff water.



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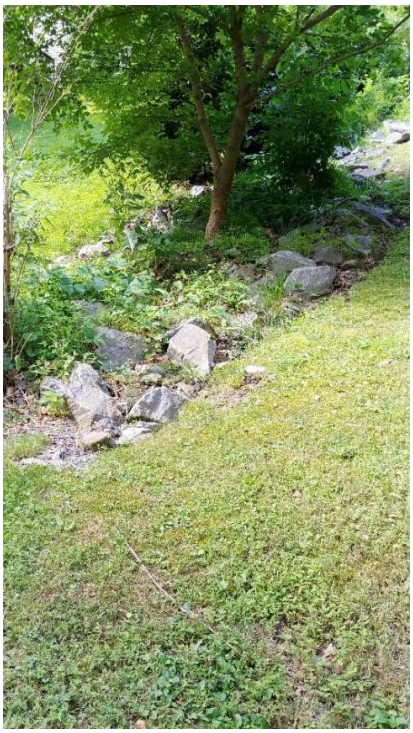

Permaeable Pavers: https://extension.umd.edu/learn/publications/permeable-hardscapes

Permeable pavers are composed of a layer of concrete or fired clay brick. The pavers are separated by joints filled with crushed aggregate. Permeable pavers are different from pervious and porous pavers in that rainwater passes around the paver opposed to through it.