National Aeronautics and Space Administration

When Life Gives You Rain, Build a Rain Garden

It's as Easy as Dig, Two, Three

At the end of April, volunteers dug and planted a rain garden between building 26 and the Goddard Child Development Center. The volunteers worked together diligently with shovels, pick axes, trowels, and a single pitchfork to dig through rock and clay to create a beautiful garden filled with native plants. The end result yielded 116 square feet of prime butterfly real estate. From the Switchgrass to the Cardinal Flower to the endangered American Beautyberry, this rain garden was designed with ecological goals in mind. A notable achievement was using compost from our neighbors at the U.S. Department of Agriculture (USDA). GSFC has been providing raw materials to the USDA for compost research. We were able to "close the loop" and use some of the compost created from our contributions to amend the soil in our rain garden.

Green Filter versus Grey Funnel

Impervious surfaces, such as parking lots, concrete walkways or rooftops prevent stormwater from infiltrating the ground. Like a grey funnel, the stormwater cascades over these surfaces, collects pollutants along the way, and flows into storm drains. In contrast, green filters, such as rain gardens, allow stormwater to infiltrate the soil and be absorbed by plants instead of gushing directly into the stormwater system. This process reduces the volume and velocity of runoff, and lessens the total amount of nutrients (e.g., nitrogen or phosphorous) and pollutants entering local water bodies. As a result, water quality improves.

For information about Goddard's rain garden, including the list of native plants we used, a garden diagram, and resources on how to build your own garden, visit http://earthday.gsfc.nasa.gov and click on "Rain Garden Installation."

June 2009

GSFC environmental bulletin

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Habitat Islands

Rain gardens, both large and small, provide vital areas of habitat for native wildlife. Butterflies, bees, ladybugs, frogs, and birds benefit year-round from the food and cover rain gardens provide. In an urban area where wildlife numbers are stressed by development, rain gardens provide a safe haven.

Turfgrass to Habitat

Are you interested in increasing the biodiversity of your yard? Why not convert that monoculture crop of turfgrass into a bit of habitat for your local wildlife population? Rain is coming.

The Finished Product

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