Founder's Park Rain Garden

WHY A RAIN GARDEN? By keeping rain -or storm- water in the natural water cycle a rain garden is a positive response to the growing urban problem of storm water runoff. The built environment can remove rainfall from the water cycle in ways that disrupts our ecosystem. The Founder's Park Rain garden demonstrates how a rain garden functions to improve water quality and return it to the groundwater.

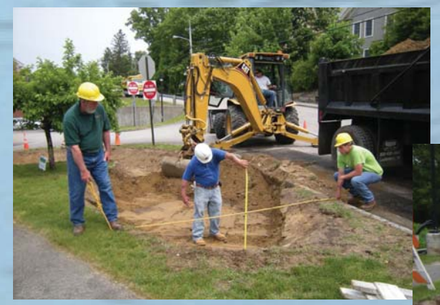
SURFACES such as roofs and roadways are "impervious" to water-- that is do not directly allow for the filtration of water back to the earth. With big rainfall events stormwater runoff can overwhelm municipal sewer systems and cause sewage overflows. Untreated sewage moves into storm sewers and then directly to streams, rivers, lakes and oceans. Today, many communities including the Town of Exeter are facing considerable costs for rebuilding sewage treatment plants due to not only the pressure of new development, but also from the additional volumes of stormwater caused by impervious surfaces. Impervious surfaces also contribute to water pollution. Water that moves over impervious surfaces can deliver pollutants from cars, trucks and other sources to our natural water systems and drinking water.

AS A NATURAL VEGETATED FILTER a rain garden can help by "treating" the stormwater it collects. Plants naturally "clean-up" many of the pollutants found in stormwater in their growing process by utilizing nitrates and other substances. Microorganisms in the soil mix "feed" on some pollutants. The sandy soil mix filters out other substances present in the stormwater that cloud water and are known as Total Suspended Solids. These cleansing processes work together to improve the quality of the stormwater and keep it in the natural water cycle.

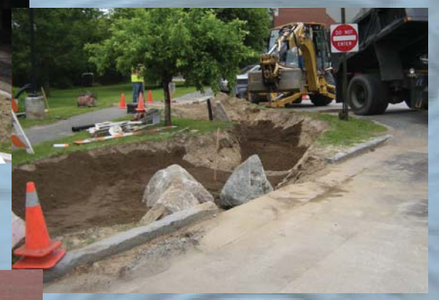
THE FOUNDER'S PARK RAIN GARDEN captures runoff from Chestnut Street that would otherwise enter into a catch basin and release directly into the Exeter River. Over the course of a year, this small rain garden can help to treat nearly 34,000 gallons of water before returning the water to the groundwater. Important design elements of the garden: Stones check the speed of stormwater as it enters our rain garden to help limit erosion; A sandy soil mix speeds the adsorption of water within a 24-hour time frame which precludes mosquitos; An overflow pipe to the lawn area prevents flooding of the pathway and parking area in an unusually large storm event; Predominately native, pathway and parking area in an unusually large storm event; Predominately native, selected plants are more likely to prevail through the demanding regimen of periodic flooding and drought and invite wildlife such as songbirds and butterflies.

HOW CAN YOU HELP? Sonsor or install a rain garden of your own. For more information on the use of rain gardens in preserving water quality, please refer to Ironwood design group's website: www.fewood.com. Visit the suppliers that generously donated to our garden for the purchase of compost, native plants and other materials that benefit our natural ecosystem.

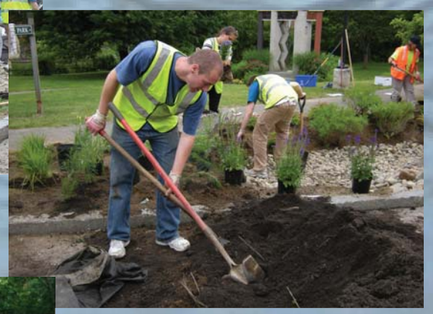
THE FUTURE With time, the plantings will mature and raise the quantities of water and pollutants treated while also increasing the scale and diversity of the garden's wildlife habitat. Silt may collect on the bottom of the stream bed and refuse may clog the overflow valve requiring occasional removal. Little other maintenance is required.

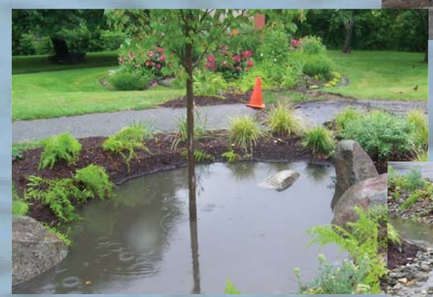


The Exeter Department of Public Works prepares the rain garden under the design and direction of Ironwood design group. Boulders slow water as it enters the garden off the steep hill of Chestnut Street. A special compost mix quickly infiltrates the the stormwater back into the groundwater table.

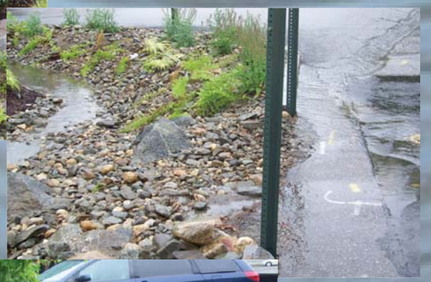


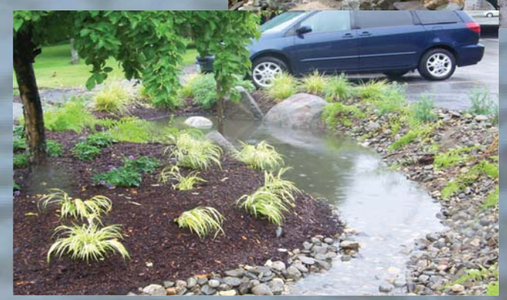
Volunteer students from Exeter High School prepare the soil for the slopes of the rain garden and install the shrubs and perennials.





Images of the first rain after the curb cut and installation of the rain garden. Stormwater flowing down Chestnut Street is diverted to the rain garden. Before, stormwater flowed to a nearby catch basin and discharged untreated, directly into the Exeter River.





Ironwood design group, LLC

STONEPOST NURSERY
QUALITY WHOLESALE PERENNIALS

CHURCHILL'S

Seacoast Farms Compost Products, Inc.

This project was made possible by generous donations and volunteers. Ironwood design group: Design and oversight of installation by volunteers. Stonepost Nursery and Churchill's Garden Center: Perennails and shrubs. Stratham Circle Nursery: Red Maple. Seacoast Farms Compost Products: Compost soil mix.

RUNOFF RETURNS