



ROLLING GREEN NURSERY RAIN GARDEN

Rick and Beth Simpson, owners of the Rolling Green Nursery in Greenland, decided that they wanted to build a rain garden at their lovely, expansive grounds on Breakfast Hill Road. The Simpsons consulted area experts, and a team from UNH Cooperative Extension and Soak Up the Rain NH (SOAK) got to work on the rain garden design. The rain garden serves two important purposes: it is as a demonstration/exhibition for their customers and it corrects a problem area that would flood and ice-up near a parking lot and entrance to their storefront.

LANDSCAPING FOR WATER QUALITY

By coincidence, UNH Cooperative Extension and NHDES SOAK program were holding a workshop for professional landscapers called "Landscaping for Water Quality." The timing and location of the Rolling Green rain garden project allowed for a hands-on training session on rain garden plants and planting design to be incorporated into the workshop series.

At a session in October 2015, the trainees had a tour of the planned rain garden area at Rolling Green, learned about rain garden plants, and heard from experts about function and design. Rick and Beth selected a variety of plants that would work in this type of garden – plants that can stand both periods of inundation and drought. When it rains, the rain garden's job is to let the water pool up and slowly sink in. The plants and soils in the garden absorb water and filter out potential pollutants such as excess nutrients. Participants then had a work session to formulate ideas and suggestions for the rain garden design.

For more information on the workshops and a directory of professionals who have completed the series, visit the UNH Cooperative Extension at www.extension.unh.edu/Sustainable-Landscapes-and-Turf/Landscaping-Waters-Edge or simply search their website for "landscaping for water quality."

Landscape designer Lauren Chase Rowell reminds students to think carefully about how to use plants for multiple functions.



Rick Simpson, owner of the Rolling Green Nursery in Greenland, shows off some potential rain garden plants, such as Joe Pye Weed seen in the foreground.



BUILDING THE RAIN GARDEN

The project team estimated that over 9,000 ft² of impervious cover (hard surfaces that shed off instead of soak up falling rain and melting snow), including a portion of the store's roof and customer parking areas, drain to a low spot near the store entrance. This creates a lot of runoff and would require an extremely large rain garden. Rather than making the surface area of the garden bigger, the project team decided to make the rain garden deeper, which allowed for a stone reservoir under the garden.



The large rain garden at Rolling Green Nursery in Greenland will collect runoff from more than 9,000 square feet of impervious areas. The rain garden will be finished in spring 2016.

The Simpsons did most of the heavy lifting with their excavator to prep the rain garden. They carefully created a level bottom and then applied a layer of crushed stone followed by a layer of pea stone to create the stone reservoir. A mix of loam, sand, compost, and fine wood chips were added on top of the stone as a planting bed. As a bonus, Rick installed a rain barrel which captures the rooftop runoff and directs the overflow into the garden through a buried pipe.

RAIN GARDEN PLANTING PLAN

The rain garden planting will be completed in Spring 2016. Rolling Green is considering planting designs such as the one seen on the following page, completed by landscape designer Lauren Chase-Rowell. Rick and Beth visualize the garden as a showcase for rain garden plants to inspire visitors to consider a rain garden on their own properties.

Rain garden plants must be able to tolerate inundation with water as the garden slowly drains after a rain storm. Other rain garden design elements are similar to elements of traditional perennial gardens: color throughout the seasons, contrasting textures, complementary height arrangement, etc.



"Landscaping for Water Quality" workshop participants work on design ideas for the rain garden.

Once complete, the Rolling Green rain garden is estimated to capture 30,056 cubic feet (that's about 225,000 gallons!) of stormwater each year, reducing suspended sediments by 354 pounds/year, phosphorus by 0.83 pounds/year, and nitrogen by 3.17 pounds/year.

