

Adapting to Climate Change

Why and How to Plant Rain Gardens in Tantramar

What is a rain garden?

A rain garden is a shallow depression (4-8 inches deep) that is planted with deep-rooted native plants and grasses. It allows rainwater runoff from impervious areas like roofs, driveways, parking lots, and compacted lawn areas the opportunity to be taken up by water-tolerant plants and absorbed into the ground naturally instead of entering storm drains. A rain garden mimics the natural absorption and pollutant removal abilities of a forest or meadow. Rain gardens can absorb 30-40% more rain than a standard lawn! They capture and hold rain water for a short time, releasing it slowly into the soil.



How does it work?

Deep rooted native plants (that are naturally found at a wetland's edge) help to take up excess rain water in the rain garden and return water vapor to the atmosphere. Their deep roots also help to increase the permeability of the soil and sustain diverse microbial populations involved in biofiltration. Deep rooted native plants are also the best adapted to our climate and have the ability to find water deep in the ground during dry periods. Rainwater and pollutants filter through the soil layers before entering the groundwater system. Because water is held in the garden for only a short time before it is absorbed into the ground, rain gardens are not breeding grounds for mosquitoes.

Why build one?

Tantramar has experienced freshwater floods in the past and will see more intense storms more often due to climate change. Even small towns can have too many impermeable surfaces that increase storm water runoff and put pressure on storm drains. Building a rain garden in your own yard is one of the easiest and most cost efficient things you can do

reduce your contribution to storm water runoff and adapt to climate changes. Storm water runoff can cause erosion, contribute to water pollution, localized flooding and even decrease groundwater levels. Rain gardens can also keep pollutants out of coastal waters and reduce coastal erosion.

How to make your own rain garden:

Rain gardens are easy and quick to build. They can be installed without permits or heavy equipment.

Choose a location

Place the garden at least 10 feet (3m) away from your home or building to prevent damage to your foundation (from the water that will collect there). Do not dig the garden over a septic field. Choose a location near your downspouts or driveway to capture rainwater. Try to choose a naturally occurring low spot in your yard and a location in the sun or part sun. Do not place your garden on a slope of more than 12%. If there is a slight slope, you can build a small berm (earth wall) on the lower side to help keep the water in place so it has the chance to absorb into the ground.

Measuring drainage area

If you are capturing water from a roof or other hard surface you should measure the specific drainage area of that surface and multiply by the number associated with the type of soil you have. For sandy soil multiply by 20%, for loam use 30-35% and for clay use 45-60%. However, any size rain garden is better than nothing and will improve the land.



Choose your plants

Native plants (flowers and grasses) are great for rain gardens because they are best adapted to our climate. Those naturally found near the edge of a wetland or in ditches can tolerate being wet and dry. Here are some suggested plants for rain gardens in Tantramar:

- Beaked Sedge
- Black-eyed Susan
- Blue Flag Iris
- Blue Vervain
- Blood Root (best in shadier spots under ferns)
- Cinnamon Fern
- Common Rush
- Joe Pye Weed
- Ostrich Fern (fiddleheads)
- Swamp Milkweed
- Sweet Grass

The above plants (native to the Maritimes) can be purchased from Anderson's Greenhouse, MacArthur's or Corn Hill Nursery. There are many other suitable native plants but they are harder to find commercially. Contact the nurseries to find out other suitable plants they may have. Many of the above plants will also attract butterflies and bees. It is best to use 1 year old plants (or older) in 1-2 gal size pots so that they are sturdy and established.

Design your garden

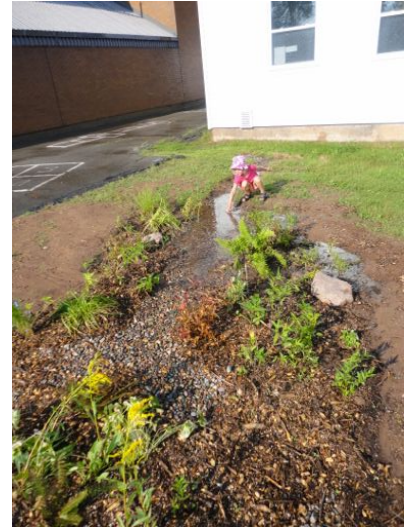


Knowing how big your garden should be and the flowers you can get for it, decide on your design. Organic shapes are pleasing to the eye and work well such as kidney beans, tear drops, and other curvy shapes. Clump species of plants together for a larger impact statement. As a guide, plant your plants about 1 foot apart if using 1-2 gallon size plants (or no more than one plant per square foot).

Source: Information is adapted from A. Marlin (2013) Regional Centre of Expertise on Education for Sustainable Development – Tantramar.

Dig the garden and plant the flowers and grasses

****Before digging check with NB Power to make sure there are no underground wires!**** Then, remove the turf grass and dig your garden approximately about 8 inches deep. Use the soil to build a berm around the lower edges of the garden if necessary (if sloped). Make sure the berm material is stable and waterproof to allow water to be held in the garden. Amend the soil with 2-3 inches of compost. Plant your native plants



according to your design using a hand trowel. Dig a hole, fill with water, plant a plant. Continue until your garden is planted. Then spread 2-3 inches of mulch around the plants to keep the soil damp and the weeds out.

Water and Maintenance

After you've planted the garden, water every other day for 2 weeks if it doesn't rain until your garden looks to be growing on its own. Good watering is vital to establish a rain garden. Weed the garden as needed but the mulch will help to keep weeds at bay. Eventually as the rain garden plants take over, little or no weeding or watering will be required. Rain gardens are designed to be low maintenance storm water management systems. Enjoy your garden and thank you for helping to manage storm water and adapt to climate change in Tantramar!

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