

RAIN GARDENS



Manage stormwater on your property to help improve water quality in your community.



What is a Rain Garden?

A rain garden is a functional piece of landscaping that benefits pollinators, the environment and your property. It is typically a shallow bowl-shaped depression that is planted with native, hardy and low maintenance plants. A rain garden is designed to catch rainwater runoff in your yard.

The best species of plants to place in rain gardens are perennials native to your region. They are adapted to wet and dry conditions and have deep roots that will help soak up rain water. Such long roots also create pores in the soil that helps rainwater filter into the ground.

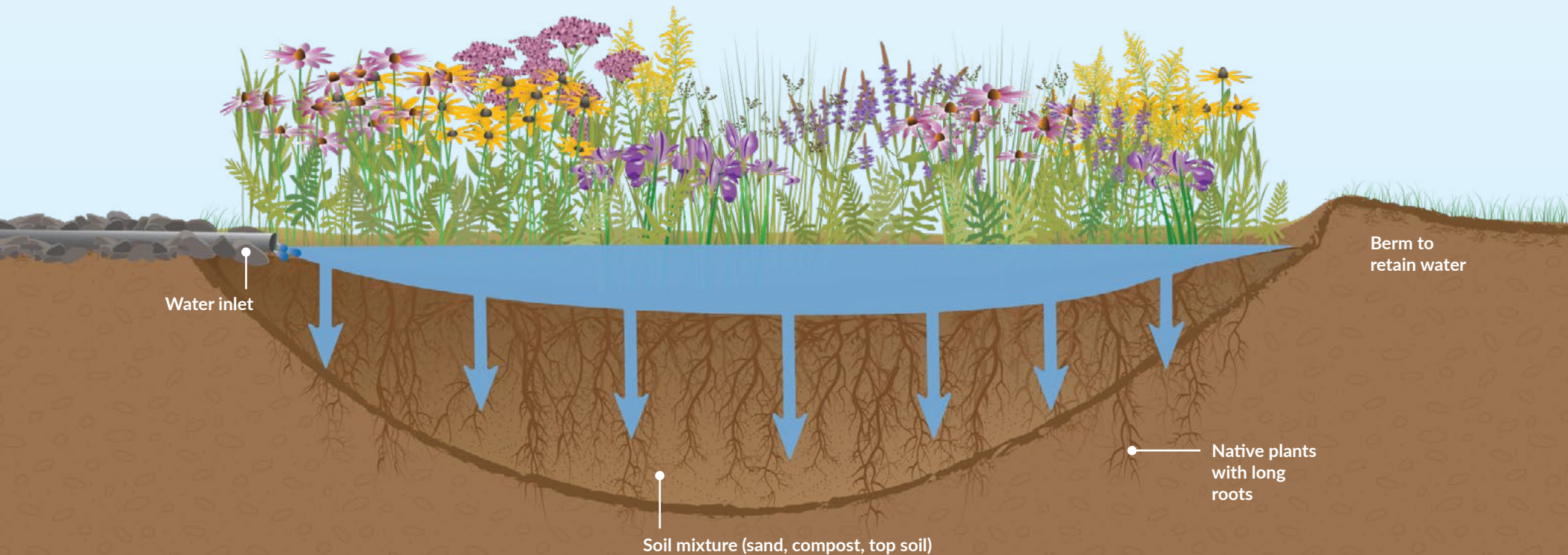
These gardens are created in lower-lying areas or within the flow paths where water drains away from your property. Unlike wetlands, rain gardens are dry most of the time; they hold water for a brief period during and after a rain event. And since the water seeps into the ground within a 24- to 48-hour period, rain gardens are not a hotbed for mosquitoes.

What Are the Benefits of a Rain Garden?

As the development of urbanized areas grew, human infrastructure has replaced forests and wetlands with impervious surfaces such as asphalt and buildings. Such surfaces prevent water from being absorbed naturally into the ground and are the main contributor to excess stormwater runoff. Examples of impervious surfaces include streets, parking lots, paved driveways, rooftops, compacted lawns, or any other surface that prevents water from infiltrating the ground.

Rain gardens are a sustainable way for homeowners to help manage surface water runoff to improve their communities' water quality. In a process known as bioretention, pollutants found in stormwater runoff can be filtered through the actions of plants, micro-organisms and soil.

Rain gardens absorb about 30% more water than a typical lawn. This contributes to groundwater recharge and reduces the risk of flooding. By choosing native species, a rain garden provides habitat and food for wildlife and benefits pollinators. Rain gardens can beautify your yard with colourful flowers and artistic creative designs.



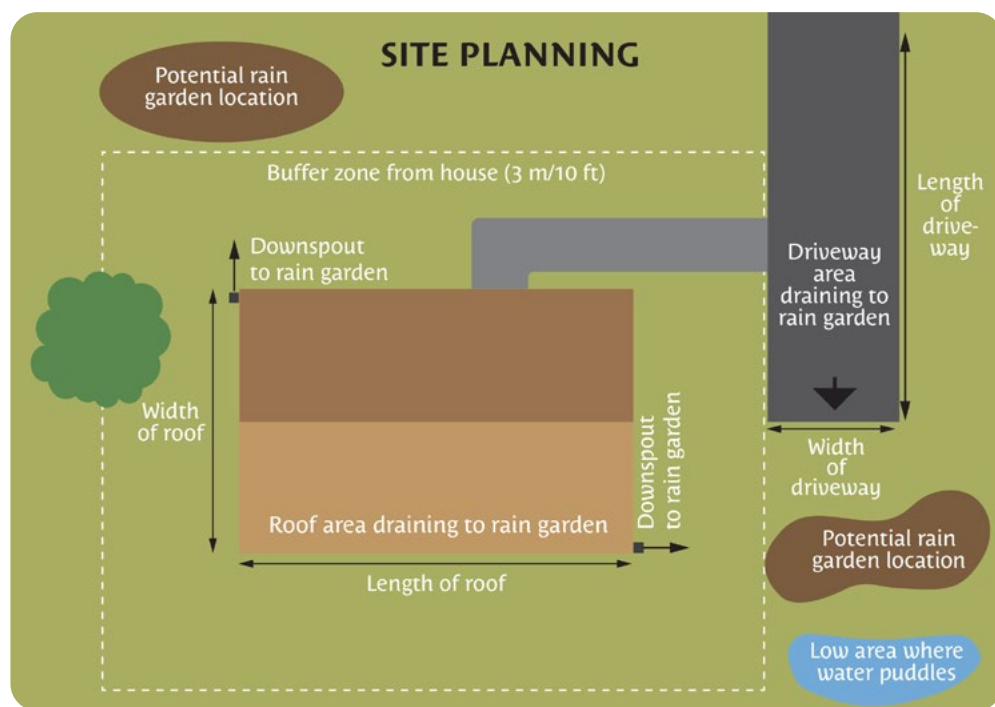
Rain Garden Construction Overview

1 - Where Should I Build My Rain Garden?

A rain garden can be installed around your home to capture runoff from the rooftop and driveway. It can also be placed along a drainage path to capture water flowing towards the lowest spots of your yard. When choosing the location for your rain garden, there are several factors to consider:

- Must be at least 3 metres (10 ft) away from the foundation.
- Must be installed more than 4.5 metres (15 ft) from a septic tank, leach field or drinking water well.

- Call before you dig! Make sure there are no underground utilities before disturbing the soil.
- Avoid locations too close to trees.
- Do not choose an area where water already pools; this is an indication of poor infiltration or a high water table.
- Choose an area that is exposed to full or partial sunlight.
- A rain garden can be planted on a slope no steeper than 12%.
- The type of soil can affect where to plant a rain garden; choose a location with well-draining soil.



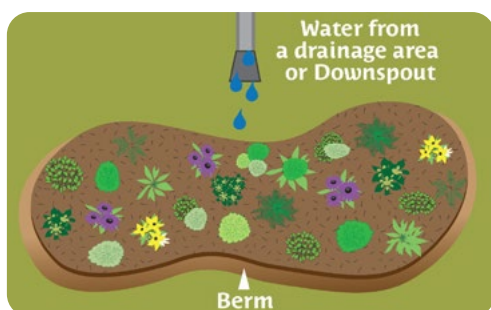
2 - Why is the Soil Type Important?

The type of soil will influence the rate at which the water will infiltrate the ground. Water drains faster in sandy soil than in soil containing clay. There are simple tests that you can do to determine the type of soil in any potential spot for your rain garden, such as an infiltration test or a ribbon test.

3 - How Big Should a Rain Garden Be?

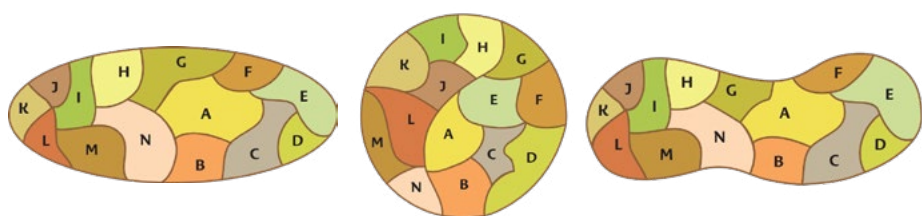
A residential rain garden is typically between 10 and 30 square metres (100 to 300 square feet) and approximately 10 to 20 centimetres (4 to 8 inches) in depth. As a frame of reference, a standard vehicle parking space measures 16.7 square metres (180 square feet). On average, a rain garden should come to approximately 15% of the drainage area. However, an undersized rain garden is better than none at all, so you may simply use the space that is available to you.

4 - What is a Rain Garden Berm?



A berm is an "earth wall" that captures and retains water flowing into the rain garden. Berms are crucial if the garden is on a slope. The slope will help determine the height of the berm, which should create a perimeter that is the same level all around. It should be about 30 centimetres (1 ft) wide, compacted and covered with either mulch or grass seed.

5- What are the Typical Shapes of a Rain Garden?



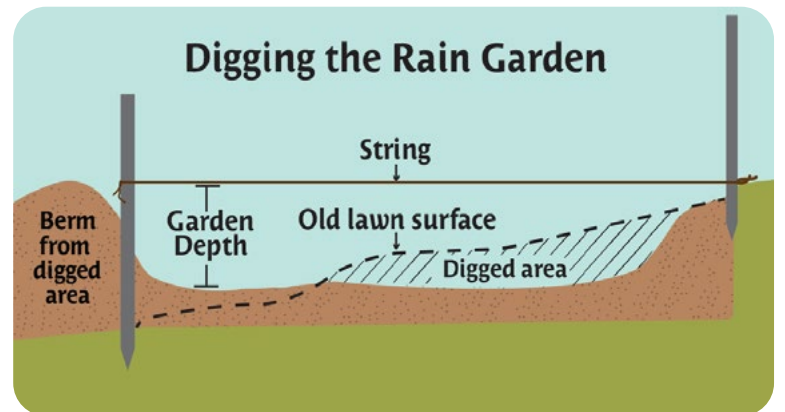
When designing your rain garden, there are several shapes that you can choose from. A typical rain garden is twice as long as it is wide. Rain gardens can be oval, kidney-shaped, teardrop shaped, odd shaped or form-fitting around infrastructure such as walkways.

6 - Do I Need to Use Rocks for my Rain Garden?

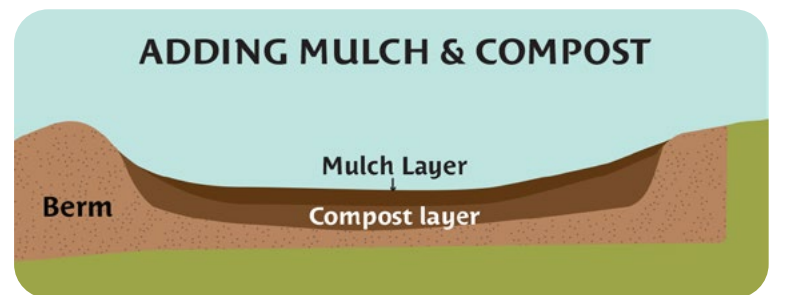
Rocks or stones in a rain garden can have functional and decorative purposes. They can be used to reinforce the water's entrance to prevent erosion. They can be used to help channel water to your garden by building a rock-lined swale. The use of decorative stones such as river rocks can elevate the beauty and stability of your rain garden. Edging a garden with rocks, bricks or other materials creates a physical and visual barrier that separates the garden from the surrounding lawn.

7 - How Do I Build a Rain Garden?

- A - Define the borders of your garden using a string or chalk.
- B - Remove the surface grass using a shovel or a spade. The pieces of sod can be used later to build the foundation of a berm.
- C - Dig the soil bed into a bowl shape. Do not dig when the soil is wet to avoid compaction in the garden. Gently slope the sides of the depression and create a flat bottom that is level.
- D - Build the berm with the excavated soil. Use a rake to shape and smooth the berm, and compact the soil as much as possible.



- E - Optional: Design a water inlet and overflow using rocks or piping.
- F - Optional: Install a rock border or other edging material.
- G - Add compost to increase the survival rate of your plants.



- H - Set perennial plants a minimum of one per square foot apart. Leave at least 1 metre (3 ft) of space between shrubs.
- I - Use the pot of each plant to measure the size of the hole. It should be twice as wide and deep enough for the pot to fit inside.



- J - Place the plant into the hole, fill with dirt and press down firmly with your hands until the plant is stable.



- K - Spread an even layer of mulch over the entire surface of the garden, carefully between your plants. The mulch should be no more than 5 to 7 centimetres (2 to 3 inches) thick.
- L - Water the plants immediately.

8 - Are Rain Gardens High Maintenance?

Rain gardens need relatively little attention and care. However, there is some maintenance required to ensure your plant's survival and the functionality of your rain garden.
























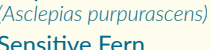

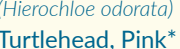
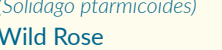
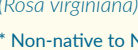
- Water new plants regularly until their roots are established. Watering may also be required during long periods of heat and drought.
- Remove weeds during the first few years to prevent them from competing with your plants.
- Reapply mulch every few years to maintain a 5 to 7 centimetres (2 to 3 inches) thick layer.

What Plants Should I Use in a Rain Garden?

The following is a list of perennial plant species that are recommended for rain gardens. Most of them are native to New Brunswick. These plants are adapted to wet and dry conditions, and can tolerate periodic inundation.

Every rain garden should include a mixture of sedges, rushes and grasses. They are flood-tolerant and will maintain the core functions of the rain garden. Flowering plants will support pollinators and beautify your yard with a splash of colour.

When you choose plants native to New Brunswick, you help support biodiversity by providing wildlife with food and habitat.

 Full Sun	 Partial Shade	 Full Shade	 Drought tolerant	 Flood resistant	 Pollinators
Autumn Joy Sedum* (<i>Hylotelephium telephium</i>)					
Black-eyed Susan* (<i>Rudbeckia hirta</i>)					
Bloodroot (<i>Sanguinaria canadensis</i>)					
Blue Flag Iris (<i>Iris versicolor</i>)					
Blue Vervain (<i>Verbena hastata</i>)					
Boneset (<i>Eupatorium perfoliatum</i>)					
Butterfly Milkweed* (<i>Asclepias tuberosa</i>)					
Christmas Fern (<i>Polystichum acrostichoides</i>)					
Flame Grass* (<i>Miscanthus purpurascens</i>)					
Goldenrod (<i>Solidago sp.</i>)					
Joe Pye Weed (<i>Eupatorium maculatum</i>)					
Karl Foerster Grass* (<i>Calamagrostis acutiflora</i>)					
Lake Sedge (<i>Carex lacustris</i>)					
Marsh Blue Violet (<i>Viola cucullata</i>)					
Marsh Marigold (<i>Caltha palustris</i>)					
					
					
					
					
					
					
					
					
					
					
					
					
					
					
					

* Non-native to New Brunswick

Contact us for more information.

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