



# City of Big Lake Environmental Education Newsletter

August  
Sustainable Yards

## Native Plantings

### Planting natives for beauty & biodiversity

Turf grass lawns require lots of maintenance—watering, the burning of fossil fuels for mowing and other upkeep, pesticides, and fertilizers—which impact water quality and can [contribute to climate change](#).

Many of the non-native, ornamental plants we plant in our gardens have little value to [wildlife](#). Some of these flowering ornamental plants produce no nectar or pollen for bees or butterflies.

You can play an important role in helping to preserve species and biodiversity in your own yard by landscaping and gardening with native plants. Replacing turf grass and non-native plants with natives—even in small sections of your yard or garden—pays big environmental dividends!

### Some of the many benefits of native plants

- Planting a variety of native plants increases [biodiversity](#). We need biodiversity—it runs the ecosystem on which we depend.
- Native plants provide food and shelter for wildlife. Many insects require a specific host plant to lay their eggs on and the young to feed on (e.g. monarchs and milkweeds). Animals require many different plants throughout their life cycles to remain healthy and robust.
- Native plants are adapted to the local climate and soil conditions where they occur naturally. Many native plants have deep roots, and require little to no watering once established. These deep roots decrease erosion and filter stormwater, nutrients, and pollutants that would otherwise end up in our lakes, ponds, wetlands and streams.



### Tips to get you started

**Learn what you have.** This will save you time and energy later on. Learn to [distinguish](#) non-native weeds from native plants. Manage the aggressive, perennial invasive plants that will compete with the native plants for space, water and nutrients. Leave or transplant any native plants you might already have in your yard.

**Start small.** Perhaps you have an area of your lawn or garden that needs a re-do. Areas of lawn where grass doesn't grow well or that you are tired of mowing are perfect candidates to get you started. Reduce some areas of turf and add a pollinator garden or a rain garden.

**Pick the right plants for the right place.** Native plants come in a variety of colors, shapes and sizes. Some plants grow well in full sun with sandy soils, others prefer wet soils or shady areas.

**Variety is the spice of life.** Try to have plants that flower in succession—different plants that bloom from early spring all the way through to the fall. Plant a variety of different types of plants—flowers, grasses, sedges, shrubs and [trees](#). The larger variety of plants you have will support a larger variety of life.

**Native landscaping doesn't have to look "wild."** You may prefer a wild look. If you want a more manicured garden, plant selection is important. You can also utilize mulch, spacing, strips of grass, paths, and attractive fencing for a more formal look.

**Support local native plant nurseries and companies.** There are many great companies in Minnesota that specialize in growing or managing native plants/invasive plants. They have the expertise to give you some ideas of what plants might work for your situation. [Native plant nurseries in your area](#) will have grown local ecotype native plants—ones that came from your region that are adapted to local conditions.



**"Free" money.** Many [Soil and Water Conservation Districts](#), [Watershed Districts](#), and cities provide cost-share money for people who want to help the environment by planting native plants in their yards. See [http://www.bwsr.state.mn.us/native\\_vegetation](http://www.bwsr.state.mn.us/native_vegetation) for more helpful resources.

**Don't have a yard?** Consider adopting a local park or open space for planting natives. Be sure to ask for permission first. Or support non-profits and other organizations that are doing this type of work.

## Rain Gardens

### What is a rain garden?

- A rain garden is simply a garden designed to catch rainwater runoff from your roof, yard, or driveway. By creating a slight depression in the garden, you are able to catch and absorb rainwater before it floods into the street or creates a pool in your yard, by allowing it to slowly seep into the ground. The types of plants grown in rain gardens are able to withstand partial flooding, and also create beautiful new landscaping for your yard!



### The Benefits of Rain Gardens

- Rain gardens can be made in various shapes and sizes, and can therefore compliment your existing landscaping.
- Native plants are common in raingardens and provide natural habitat for butterflies, bees, and birds.
- Rain gardens allow plants to establish deep roots, which prevents erosion by holding the soil in place.
- After the first year, they need very little care in comparison to the average garden.
- By slowing the flow of water, and absorbing some of it into the ground, rain gardens reduce the amount of stormwater runoff, helping to stop the greatest cause of water pollution. The absorption of water also replenishes local aquifers. In a rain garden, pollutants are filtered out of the stormwater, improving water quality in lakes, rivers, and wetlands.

Please contact City Engineer Layne Otteson if you are interested in installing a rain garden on your property.

## Rain Barrels

Many people are not aware that water can be recycled through various means. The most common ways people recycle water are by collecting or repurposing rainwater. One way to do this is through rainwater harvesting. Rainwater harvesting is often done through rain barrels. Rain barrels are containers used for collecting rainwater from a downspout. They collect roof water runoff that can be stored and used at a later date. The collected rainwater can be used to water your lawn or trees, it is also free of the minerals, chorine and other chemicals found in city water. Rain barrels can be purchased at a cost between \$70-\$300, but can also be homemade. Another way to recycle water is through raingardens. A rain garden is simply a garden designed to catch rainwater runoff from your roof, yard, or driveway. By creating a slight depression in the garden, you are able to catch and absorb rainwater before it floods into the street or creates a pool in your yard, by allowing it to slowly seep into the ground. The types of plants grown in rain gardens are able to

withstand partial flooding, and also create beautiful new landscaping for your yard! More information about both rainwater harvesting and raingardens can be found on the Sherburne County Soil and Water Conservation District webpage.

## Compost

Composting is an easy way to reduce waste while improving your yard and garden soils. Yard trimmings and food scraps make up nearly 16% to 30% of waste produced by the average household. In Minnesota, 12% is food scraps and up to 18% is yard waste.

A state law, passed in 1989, bans the disposal of yard waste in landfills or waste-to-energy facilities, so much of our yard waste goes to large commercial composting facilities.

However, you can easily compost yard waste in your own backyard. By composting leaves (browns) with kitchen scraps (greens), you create a dark, crumbly mixture that can be used to improve the soil and reduce your use of fertilizer and water.

### Composting How-to

Getting your own compost bin started can be boiled down to four simple steps:

- 1) Make a compost bin or buy one,
- 2) Throw in yard waste and mix in kitchen scraps
- 3) Add water as needed
- 4) Mix it up with a shovel or pitchfork once in a while.

### What's compostable?

Kitchen food scraps such as banana peels and coffee grounds can be composted. Like any simple recipe, you'll get the best results if you use the right mix of ingredients to make your compost. The key materials are nitrogen-rich "greens," carbon-rich "browns," water, and air. All of these are essential, but they're easy to mix together for quality compost.



**Just say no.** While many materials can be composted, there are some items that you should keep out of your home compost pile to minimize odors and keep your pile from attracting scavengers like dogs and raccoons. Since compost is generally used for a soil amendment, you want to keep it free of plant diseases and unhealthy bacteria.

- Food with meat, dairy, or oils
- Pet feces (dog, cat, or bird)
- Diseased plants
- Weeds gone to seed
- Ash from charcoal or coal

**Containers.** You can compost in a simple pile, but using a container or bin helps compost piles retain heat and moisture, and keeps them neat.

**Some assembly required: Build your own bin.** Here are some instructions and material lists to build a compost enclosure.

 [Build your own compost bin](#)

### Add the first materials

If you're just starting a compost pile, you can measure out greens and browns to create a good mix of materials—for example, an equal mixture of brown autumn leaves and fresh grass clippings will give you an optimal composting combination. Don't worry about getting the mix exactly right, as it's very easy to add material to adjust the pile's performance.

- **Lay a base.** Start with a layer of browns, laying down 4 to 6 inches of twigs or other coarse carbons on the bottom of the pile for good air circulation.
- **Alternate greens and browns.** Add layers of nitrogen and carbon materials. Make layers about 4 to 6 inches thick. Once you turn the pile the first time, these materials will get mixed together and compost more efficiently.

- **Size does matter.** Most materials will decompose faster if they are broken or chopped into smaller pieces, as it makes more surface area available to your composters and water.
- **Moisture.** Your compost pile should be moist, kind of like a wrung-out sponge. Squeeze a handful of compost; if small beads of water appear between your fingers, you have enough water. Your pile will get water from rain, as well as the moisture in the greens. If the pile gets too wet, you can turn it more frequently to dry it.

### Mix up the pile: As the compost turns

Once you build your pile, the real composters get to work—bacteria, fungi, and insects help break down the materials in your compost bin. As the organic materials decompose and your compost pile is big enough to hold the heat, your pile will get hot on the inside and you might see some steam.

As living things, the microbes in your compost pile need **water** and **air** to work and live. Water allows microbes to grow and travel around in the pile to decompose materials. Turning your pile each week with a spade or pitchfork will provide air to aid decomposition and control odors.



**Repeat until it's complete.** The composting process can be pretty quick in the summer months. Your compost pile may no longer heat up after just a few weeks. Look in your pile for finished compost—material that is dark and crumbly, fresh-smelling, and no longer looks like what you originally put into your bin.

### Guess who's coming to dinner.

Composting is done by a wide variety of organisms found naturally in organic matter. They work together, feeding on your pile (and each other), to break materials down.

- **Bacteria** perform the primary breakdown of organic materials. Bacteria aren't added to your compost pile—they're found in almost all forms of organic matter. There are several different types, and they will flourish and reproduce rapidly under the proper conditions.
- **Nonbacterial composters**, fungi, worms, and a variety of invertebrates, go to work on your pile. Some feed directly on plant tissues, helping bacteria in their role of primary decomposers, while others will actually eat the bacteria. Bugs like centipedes and beetles will feed on the smaller invertebrates.

### Using finished compost

Your compost can really pay off in the yard or garden. While compost is not a fertilizer, it can contain nutrients which improve plant growth. By using compost, you can improve the soil and reduce your use of fertilizer and water. You'll learn why gardeners call compost "black gold."

- Mix in compost to improve soil. In sandy soils, compost acts like a sponge, retaining water and nutrients where they can be reached by plant roots. In clay soils, compost makes the ground more porous, creating tiny holes and passageways that help soil drain more quickly.
- Spread compost on your lawn to help fill in low spots.
- Use as a mulch for landscaping and garden plants. Mulches cover the soil around plants, protecting the soil from erosion and the drying effects of wind and sun.
- Mix compost into pots for potted plants.

### Winterizing your compost pile

Minnesota winters can be long and cold. If your compost pile is too small, it may stop composting for a while. To keep your compost pile "cooking" in the winter, you will need a pile that is 5' x 5' x 5' at all times. That should provide enough insulation to retain heat in the middle of the pile.

Another option is to remove all of the "done" compost and leave your compost bin about ½ empty. This will give you enough room to store the food waste generated over the winter in your bin. The food will freeze which further softens it for composting in the spring when it warms up. In the spring, you add leaves to the bin, mix it with the food scraps and it will start composting again all by itself.

**If each of us does a little bit, we can make a BIG difference!**

All information came from the Minnesota Pollution Control Agency and Blue Thumb