

HEALTHY SOIL

Healthy soil grows resilient plants! It also holds, cleans, and infiltrates stormwater. Luckily, you can build healthy soil starting with the plants you put in the ground.

What does healthy soil need?

Living Organisms:

The best thing you can do for your soil is encourage a community of healthy microorganisms, such as fungi and bacteria, living within it. You can do this by adding native plants! As plant roots grow, they pump sugars and proteins into the soil that feed helpful bacteria and fungi. In return, these micro-buddies will fertilize your plants with essential nutrients!

If you have a diversity of native plants and minimize disturbances, these roots will create a bustling network of microorganisms that will support your plantings.

Remember: healthy soil starts in the roots!

Roots + Organic Matter:

Your community of micro-buddies will build up the quickest if they have a variety of roots and organic matter to feed them. Introducing a mix of trees, shrubs, flowers, and cover crops to your planting will ensure that roots are found at various depths in the soil.

Compost is also useful food for bacteria and fungi!

Oxygen:

Healthy soil has air pockets that allow oxygen to reach the micro-buddies and roots in the ground. When soil is compacted, these air pockets disappear and so do the microorganisms that rely on them. Soil usually becomes compacted from human disturbances such as fertilizers, herbicides, pesticides, salts, and tilling.

Minerals + Nutrients:

Minnesota is home to a wide range of soil types, including both sandy and nutrient-rich soils. Native plants aren't picky and have adapted to grow in these variable conditions, so don't worry about adding extra amendments or new soil to your planting. As long as you have native plants and micro-buddies in the ground, your project will be a success!

Quick Tips for Healthy Soil

- 1) Keep it covered** → Put cover crops, dried leaves, grass clippings, or shredded hardwood mulch in between plants.
- 2) Minimize disturbances** → Avoid pesticides, herbicides, fertilizers, and tilling. Instead, hand pull weeds and turn your soil with a shovel.
- 3) Put roots in the soil** → Grow a diverse mix of native plant species and leave their roots in the ground each winter.
- 4) Add organic matter** → Prep your garden by adding 6 inches of compost prior to planting, then add 1 inch of compost every season.