

## Taking Further Action to Combat Climate Change

Minnesota is a special place. We have a wealth of native plant communities – the northern coniferous forest, the deciduous woodlands, and the tall grass prairie are all native to the place we call home.

Water, in its many forms, has been abundant here. Major rivers, lakes, streams, wetlands, and bogs are found throughout the state.

Many different animals have found a home in this rich land.

We need to conserve where we can by making our lives more energy-efficient but we also need to become engaged in restoring and rebuilding the wealth we have extracted to create our modern of life.

We can all do this in our own backyard. We can learn to do it alone or we can act as part of a larger community. If you are interested in learning how to rebuild and restore some of this natural wealth, you can become engaged with your local permaculture community.

For more information, please visit [www.permaculturecollaborative.us](http://www.permaculturecollaborative.us) [www.permacultureresearch.us](http://www.permacultureresearch.us) or [www.permaculturebusiness.us](http://www.permaculturebusiness.us)

## Our Commitment

We are committed to increasing the beauty and abundance of the lands where we work by:

- Assessing the unique combination of resources – sun, water, wind, and microclimates – on the land and creating site-specific designs to make the landscape sustainable
- Improving and building soils
- Using the ecological functions of plants to solve landscape problems
- Optimizing biological diversity
- Matching plants to soils and microclimates
- Designing sustainable plant communities that will be productive for today and many years to come.

For centuries people have used plant knowledge to create productive landscapes. Ecological Gardens builds on this tradition by using knowledge from sustainable agriculture, ecology, and permaculture to design chemical-free landscapes that are biologically rich and ecologically sound.

Ecological Gardens LLC

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## Carbon Capture Gardens to Combat Climate Change



Carbon Capture above & below ground

## Ecological Gardens

Certified Permaculture Designers  
[www.ecologicalgardens.com](http://www.ecologicalgardens.com)



Compost tea provided by Ecological Tea

## How the Garden Works

Plants take carbon dioxide - CO<sub>2</sub> - from the atmosphere and store it in trunks, stems and roots. It can remain safely in the soil for millenium.

However, when we burn fossil fuels, cut forests, or till soils for agriculture we are taking carbon that has been stored in the soil for long periods of time and releasing it immediately into the atmosphere.

This has been going on for centuries. It speeded up with the industrial revolution in the 1800s and has accelerated exponentially since WWII as we began to use fossil fuels in new ways to produce synthetic fertilizers, plastics, and many of the other conveniences of modern life.

Our job now is to begin a process of ecological restoration – to remove carbon from the atmosphere and put it back into the soil.

The gardens we have designed do just that. They have been carefully capture using different plants with different root systems.

Compost tea, a concentrated blend of high quality compost and essential nutrients is blended and added to the garden to restore the soil microbiology. This increases the soil's ability to store significant amounts of carbon for long periods of time.

## Plants - Functions & Uses

In addition to carbon capture the vegetation selected for the gardens perform many ecological functions and produce products you can use. A few examples include:

Milkweed is an air cleaner and attracts parasitic wasps, bees and butterflies. The flower buds can be cooked and taste like peas.

Wild Sarsaparilla attracts pollinators. The roots can be used to make root beer. The herb has been used in treating stomach aches and itchy skin.

Joe Pye Weed attracts beneficial insects. It has been used in a tea to treat kidney ailments, painful urination, and rheumatism.



There are several different gardens you can choose from:

- The Wet Pollination Garden
- The Dry Pollination Garden
- The Sunny Rain Garden
- The Shady Rain Garden
- The Mini-Forest Garden

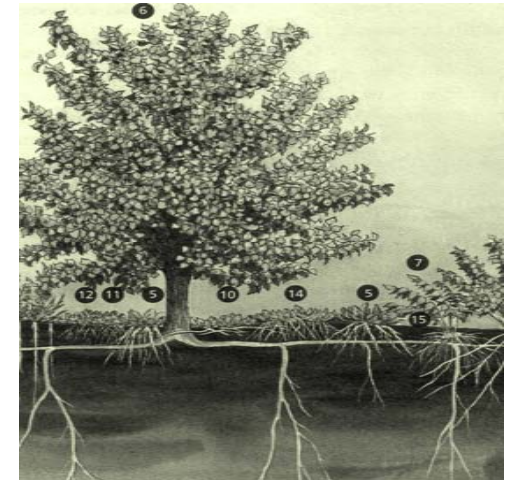
## Care & Maintenance

The gardens are designed to be self-maintaining over time. The first 18 months is a period of establishment. During this time special care needs to be taken to insure your plants become strong. They need to receive ½" of water twice a week to build strong, healthy roots.

Periodic weeding may be needed in the early phases of establishment.

In early spring the non-woody plants should be cut back to about 2" of growth for the next season.

For the first 2 years you may want to reapply the compost tea to insure there is a healthy community of microbes. You can do this yourself by purchasing the tea in small quantities. For more information, contact Ecological Tea, [info@ecologicaltea.com](mailto:info@ecologicaltea.com).



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